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ABSTRACT

A study was conducted to observe the behavior of preschool children (1) varying in age, sex and identified by teachers as thriving or not thriving; (2) in day care programs differing in mode of choice-making, i.e., teacher initiates or child initiates; (3) in the context of an analysis of physical setting and program structure; and (4) in terms of a logical categorization of possible modes of response, i.e., rejection, thrusting, responding, integrating. The Day Care Environmental Inventory was used to record observations. Ss consisted of equal numbers of thriving, average, and non-thriving children at seven open and seven closed structure day care centers. Analyses of observations are grouped as follows: characteristics of children--age differences, sex differences, differences by thrive rating, and teacher card sort; program structure; and patterns of children's behavior. A non-thriver, an average child, and a thriver at each of four centers are described, and the effect of each center on children is discussed. The three most closed centers, a moderately closed center, the borderline centers, and the two most open centers are examined. The characteristics of the children and the characteristics of the centers are also considered in their relation to the question of who thrives in day care. (For related document, see PS 006 424.) (ED)

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Part 2 of Final Report

ASSESSMENT OF CHILD-REARING ENVIRONMENTS: AN ECOLOGICAL APPROACH

Prepared for the Children's Bureau
Office of Child Development,
U.S. Department of Health, Education,
and Welfare #R-219 (C6)

WHO THRIVES IN GROUP DAY CARE?

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PREFACE

This study was written with two audiences in mind: 1) researchers who are interested in data and methodology and 2) practitioners who are primarily concerned with findings and their implications for program implementation. Hopefully, both groups of readers will find the specific information which they want and will not be unduly burdened by details which are not useful.

A study such as this is dependent on many people. First, our appreciation goes to the teachers and children who permitted us to intrude on their time together, and to the directors who granted us permission to visit their centers. They were all gracious, helpful and incredibly patient with "those ladies with things in their ears". (These were our timers which children sometimes described as hearing aids.)

It is impossible to describe the contributions of our committed staff. Sybil Kritchevsky, Elizabeth Jones, Cynthia Milich and Ede Haselhoef observed throughout the study and all contributed to the refinement of the observational inventory. Sybil Kritchevsky participated actively in the development of the inventory, especially the spatial analysis.

Ede Haselhoef and Dorothy Baranski shepherded 22,194 minutes of 15-second coding and 1,687 activity segments, each with its own codings, from observation sheets to IBM cards and back again. Ede Haselhoef took major responsibility for submitting computer programs. Without their patience and determined insistence on organization and accuracy, the findings presented here would never have seen the light of day. Elizabeth Jones greatly improved the readability of this manuscript by her persistent editing and innumerable suggestions.

Fred Ebrahimi, of the Campus Computing Center at UCLA, programmed our data and provided much helpful consultation. We particularly appreciated the interest, understanding and unfailing good humor which he brought to the problems that our massive file of data presented. Our thanks also goes to Dr. Lois Murphy who first proposed looking at thrivers and non-thrivers.

Finally, appreciation goes to the families of the entire staff, but particularly to my husband and our two children, Leslie and Sara.

Elizabeth Prescott

INTRODUCTION

The development of day care services on a large scale is now under serious consideration at a federal level. At present group care accounts for only about six percent of all day care in the United States 1/. However, this form of care, because most visible, has been a primary focus of those concerned with increasing community day care services. Although everyone advocates quality day care, there is a paucity of information which could determine whether or not the approaches to quality which have developed do in fact produce demonstrable effects at the level of operation. There is even less information about the long range effects of day care experiences on children. If day care services are to be available on a broad scale, the development of some sound bases for evaluation of quality seems essential.

The most long-standing efforts to control quality of day care services have come from the field of licensing and regulatory administration. Examples are state licensing statutes and federal inter-agency day care requirements. Here regulation takes the form of standards or rules which spell out what must be provided in or excluded from buildings and grounds where children are housed, the number and kinds of adults who will work with children and the age and characteristics of children served. These rules have been concerned primarily with care and protection of children and are based on common sense and community consensus. The desirability of developing a data base for such standards has been proposed but not widely implemented (Wolins, 1967).

Within the fields of psychology and education efforts to obtain quality have been expended on curriculum models. Here, unlike the field of regulatory administration, serious attention has been given to evaluation. Effectiveness has been most commonly assessed by changes in scores on tests measuring cognitive variables. However, most of the efforts at curriculum development have been directed to a limited population (primarily low socio-economic four year olds) serviced by a half-day program. Little attention has yet been given to the possibility that such models may not be appropriately or effectively transferable to day care programs which deal with a wide age range in settings where the length of day determines many aspects of the structure.

At the level of daily involvement, teachers and parents also are concerned with quality. Teachers have a view of quality which is somewhat at variance with those of regulatory agencies or educators. For

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1/ In-home care by a relative or another person accounts for 47%. Care in another person's home (family day care) accounts for 31% of care. The remaining 16% of mothers work only during school hours or keep the child while working (White House Conference on Children, 1970).

them, first of all, a program must be workable in the sense that it offers a structure which enables a teacher to get from the beginning of the day to the end of it with some degree of comfort. Experienced teachers see two issues involved in quality: (1) They want available resources and flexibility to do things that they judge would be good for children. (2) They worry about children who do not seem to be thriving in the program. Often teachers feel that researchers and implementers of social policy do not touch their concerns.

The needs of parents, beyond their needs for day care services, have not always received serious consideration. Planners and teachers often seem insensitive to the constraints within which parents operate and to their needs for genuinely supportive services from the community. Parents need day care services which make their work and family life compatible. One of their first criteria ordinarily is that the center be close enough to home and offer hours of care which fit in with family needs. Beyond that parents want good care for their children, that is, care as good as they could offer at home or would wish to have available in a good home. This is a somewhat different definition of quality than that perceived by those concerned with regulatory administration or curriculum. It is not primarily a custodial or a cognitive goal but a broad social-emotional goal 2/.

Furthermore, a parent is concerned for the well-being of an individual child, her own child. A parent may sometimes be uninformed or misjudge a program, but her evaluation of a program will stand or fall with her perception of what this program is doing for a particular child at a particular point in time. In other words, she is concerned with individualization.

Each of the emphases described seems pertinent to issues of quality and hence to effects of day care on children. However, attempts to link conditions to outcomes appear premature without descriptive data which provide some detailed information about interrelationships of variables and their impact on children's day-to-day experience. The description of an environment is essentially an ecological problem and requires consideration of large numbers of variables as they relate to children's experience. For this reason the basic question which we are trying to answer has been framed in broad terms, namely:

> Can dimensions be identified in environments for young children which are helpful in assessing an environment's pertinence, richness, and adequacy and which also predict its usefulness

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2/ Richard Rowe (1972), in a study of child care in Massachusetts, found that the most frequently cited (by 220,000 parents) characteristic which parents wanted was that the program should help their children get along with others.

for immediate adaptation and for future growth of children with diverse developmental and social histories?

In this paper the environments with which we are concerned are group day care centers. We will be reporting data from an observational study of characteristics of children in group day care 3/.

3/ In the course of the study we also made comparative observations of children in family day care and children who spent their day in a nursery school-home combination. These data, as well as data on adult/child ratio and specific characteristics of activity segments and center space, will be reported in subsequent monographs.

CHAPTER 1

THEORETICAL CONSIDERATIONS

Our approach to the study design was based on the following assumptions:

(1) That there are marked differences in children's individual style of approach to a given milieu, stemming from temperament and prior experience;

(2) That there is a synomorphy of behavior and milieu 1/ and that socialization can be described as the process of learning a wide variety of appropriate behavior-milieu synomorphs; and

(3) That choicemaking within the environment provides the opportunity for developing increasingly differentiated ego sets 2/.

Our orienting theoretical perspectives are Erik Erikson's conceptualization of developmental stages (Erikson, 1950), Roger Barker's theory of behavior settings (Barker, 1968), and Cumming and Cumming's idea of ego sets (Cumming and Cumming, 1967).

These assumptions provided a basis for deciding which of the almost unlimited possibilities in a day care environment would be selected for description in order to provide a context for our detailed observations of children's modes of response within the environment.

Differences Among Children

Children can differ in many ways. Age and sex are two easily identifiable and commonly cited characteristics. Temperament is more difficult to identify, although mothers frequently describe and defend their different ways of handling individual children on the basis of temperament. Individual differences due to temperament have been widely assumed. Ilg and Ames (1955) have described variations in temperament presumably related to inborn traits and proposed that effective discipline must take such differences into account. Thomas et al (1963),

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1/ "Synomorphic means similar in structure; . . . In the case of a worship service, both the pews (milieu) and the listening congregation (behavior) face the pulpit (milieu) and the preaching pastor (behavior). The behavioral and somatic components of a behavior setting are not independently arranged; there is an essential fittingness between them." (Barker, 1968, p. 19)

2/ Ego set - "an internal representation of a constellation of sequence of events experienced as part of an environment with a specific affective tone." (Cumming and Cumming, 1967, p. 32)

in a longitudinal study of children from infancy, provided data which support the idea of temperament. Murphy (1962) studied a group of children over time, observing them under a variety of circumstances for the purpose of describing variations in adaptation which she has called coping styles.

A further development of the idea of temperament has been the proposal that certain traits or qualities of temperament can produce stress in the relationship between child and caretaker. Murphy (1968) has suggested differences in vulnerability among children based on certain characteristics and past history. Thomas, Chess and Birch (1968) proposed characteristics which appear associated with development of behavior disorders.

Other investigators have suggested marked differences in competence among children based on observations of their behavior in group settings (White, 1972; Costello, 1969). Although they have suggested antecedents in adult-child interactions, these observers have not related these differences to temperament. Costello has experimented with ways of structuring a nursery school program to meet the differential needs of children according to basic competences in coping.

Regardless of etiology, we were interested in identifying children who, while normal, were not considered to be thriving as judged by the staff responsible for their well-being. It seems to us that these children were most apt to be at risk in group day care and, furthermore, that their adaptation (or lack of it) was likely to help us approach our basic problem of identifying critical dimensions in environments.

We decided to select these children on the basis of staff perception of whether or not a child was thriving because it seemed important to tie the adult's subjective perception of the child to our more objective observation of the behavior. In order to learn more about teachers' specific perceptions of characteristics of children so identified, we developed a card sort of 36 characteristics (see Appendix B-1) generated from characteristics identified by the authors whose works have been cited.

Behavior-Milieu Synomorphs

Relatively little attention has been paid to the ways in which the environment structures and organizes social interaction. Roger Barker and his colleagues have developed a theory of behavior settings with considerable data to support it (Barker, 1968; Barker and Gump, 1964). Hall (1966) has suggested a variety of relationships between behavior and space across cultures, learned as part of a child's acculturation. Sommer (1969) has examined some specific ways in which behavior can be predicted from spatial arrangements.

The concept of milieu therapy also has emphasized the importance of the interaction of persons and environment. For example, Redl (1966), Redl and Wineman (1957), Bettelheim (1950), Stanton and Schwartz (1954), and Cumming and Cumming (1967) all recognize the importance of the environment and cite examples of behavior elicited by environmental cues.

In a previous study we found that teachers' behavior and children's degree of involvement could be predicted from ratings on the complexity and organization of space. These characteristics, in turn, were related to a number of other variables within the setting, including program format, kinds of lessons taught, and teachers' attitudes toward authority and dependency. We have used spatial ratings in the present study to provide data on the milieu in which we observed children's behavior.

Choicemaking

As experience with implementation of curriculum models in early childhood programs has accumulated, attention is shifting from interest in children's test scores to questions about actual differences or similarities in program at the level of operations. During early attempts at evaluation, Gotkin observed of innovative education programs that "none have translated into other settings with anywhere near the spectacular results obtained under the guidance of the innovator" (Gotkin, 1968, p. 33). He suggested that implementation is a critical issue.

As a result of his experimentation with outcomes of three curriculum models, David Weikart also has concluded that it is not curriculum which is important, but the process of implementation, most especially the attention and support which is given to teachers (Weikart, 1971). Other evidence has suggested that there are marked differences in the ways in which a model may be implemented. Banta, in a study of Montessori centers, has concluded that a standard curriculum such as Montessori can be implemented in ways which are so completely different as to make the label of Montessori a questionable descriptor of these programs (Banta, 1972). The study of Head Start Planned Variations found great differences in the effectiveness of implementation, with those programs labeled preacademic being easier to implement effectively than the discovery programs (Bissell, 1971).

Observations such as these suggest that curriculum content may not be as potent as other structuring features of early childhood programs. Mayer (1971) has proposed that one of the major differences between curriculum models is the focus for children's interactions. In the child-centered traditional program, the child is expected to interact primarily with other children; in an academic program, with the teacher; in a Montessori program, with the materials in the environment. Mayer's typology is not based on experimental data but on speculations based on her experience with curriculum models.

Our basic assumptions have led us to believe that choicemaking is an important act by which the child becomes enculturated. Our experience has led us to believe that the most important difference among programs involved choicemaking, most especially in terms of who initiates activities. We have observed a large variety of day care programs which, characteristically, do not import a formal curriculum model, and found that programs fall into two categories: (1) the teacher initiates most of the activities or (2) the children are given opportunities to choose how they will be engaged. Starting with this basic difference we expected to find many more, such as differences in direction of attention. We also expected a sample of centers selected according to this criterion to elucidate the question of fit between types of children and characteristics of centers.

Mode of Response

The categories developed for analyzing children's response came from several sources. In a previous study (Prescott and Jones, 1967) we developed a series of codings for teacher behavior grouped into categories of restriction, encouragement, guidance, and neutral behavior, based on a format somewhat similar to that used by H. H. Anderson (1943). For this study we sought a similar format which would provide an organizing framework for coding the child's moment-to-moment behavior.

Spaulding (1970) designed a precoded observation for use in primary school classrooms which categorizes behavior according to coping skills and incorporates within an organizing framework many of the behaviors listed in other comprehensive observation schedules, such as those developed by White (1972) and Caldwell (see Honig, 1970). We found this approach useful but sought a way of ordering behaviors that was independent of judgments based on classroom management considerations 3/. Horney's (1945) description of personality types as moving toward, moving against, and moving away from, suggested a way of ordering these behaviors and of tying them into a developmental framework. The final categories were examined and revised in the light of Erikson's (1950) developmental theory.

3/ For example, certain rejecting and thrusting behaviors automatically were considered as negative and anti-social.

CHAPTER 2

STUDY DESIGN

In the light of these theoretical considerations, our study was designed to observe the behavior of children (1) varying in age, sex and identified by teachers as thriving or not thriving; (2) in programs differing in mode of choicemaking, i.e., teacher initiates or child initiates; (3) in the context of an analysis of physical setting and program structure; and (4) in terms of a logical categorization of possible modes of response, i.e., rejecting, thrusting, responding, integrating.

The Day Care Environmental Inventory 1/

The Day Care Environmental Inventory consists of two different types of codes. One type of coding records the child's mode of behavior, direction of attention, and amount of adult input every 15 seconds. (See pages 9-10.)

The second type of code is based on a unit called the activity segment. The purpose of such a unit is to account for the larger activity system which provides an organizing framework for the child's behavior. Such behavior does not occur in a vacuum. It develops within a physical setting and program structure given by the center and is influenced by the behavior of the teacher who directs, supports, facilitates or stops behavior. Sometimes the child behaves exactly as the teacher and setting have defined expectations. At other times, his behavior is at variance with these expectations. Our code for activity segment descriptors attempts to sum up the child's behavior for each activity segment vis a vis the structure provided by the setting and the teacher. (See page 10.)

1/ The information here provides only a brief summary of the categories used. For a complete description see Prescott (1972).

SUMMARY OF THE CATEGORIES USED IN THE
DAY CARE ENVIRONMENTAL INVENTORY

I Fifteen-Second Coding

A. Child's mode of response

1. Rejecting
   - Ignores intrusion
   - Avoids intrusion
   - Actively eliminates or negates
   - Aggressively rejects

2. Thrusting
   - Is physically active
   - Gives orders
   - Selects, chooses
   - Calls attention to self
   - Aggressively intrudes: playful
   - Aggressively intrudes: hostile
   - Asks for help: task oriented
   - Asks for help: affect oriented
   - Gives information: task oriented
   - Gives information: affect oriented
   - Unintentionally intrudes

3. Responding
   - Looks, watches
   - Obeys, cooperates
   - Imitates
   - Gives stereotyped response
   - Receives frustration, rejection, pain
   - Receives help: task oriented
   - Receives help: affect oriented
   - Responds to questions
   - Sensory, tactile

4. Integrating
   - Shows awareness of cognitive constraints
   - Shows awareness of social constraints
   - Attends with concentration
   - Adds something new
   - Exhibits mutual social interaction
   - Offers sympathy, help
   - Exhibits hostile social interaction
   - Sees pattern, gives structure
   - Tests, examines

5. Not attending to external stimuli

6. Tentative behavior

B. Child's attention directed to:
   - Adult
   - Child
   - Environment
   - Group
   - Dual focus

C. Adult input
   - Adult instigation to individual
   - Adult pressure to individual
   - Adult instigation to group
   - Adult pressure to group
   - Total adult input

II Coding for Activity Segment Descriptors

A. Activity segment structure
   - Activity segment label
   - Program structure
   - Physical setting (place, props)
   - Play equipment type: open, closed
   - Amount of mobility
   - Social structure
   - Source of initiation and termination
   - Teacher-child ratio

B. Teacher's relation to activity segment structure
   - Mode of approach
   - Emphasis (lessons taught)
   - Influence on activity structure

C. Child's relation to activity segment structure
   - Child's action during activity segment (what the child does*)
   - Relation to activity structure
   - Interference with functioning
   - Affect
   - Degree of involvement

---

* The activity segment label tells what the segment is about, such as playing with dough.. The action describes what the child does in addition, such as develop dramatic play, or engage in lively social interaction.

Only those involvements which lasted four or more minutes received second-level coding as activity segments. Four types of identification were possible.

1. Activity segment Any involvement, lasting four minutes or longer, in which a child attended with concentration to an activity. For example, swinging on a swing, listening to a story, playing in housekeeping corner, washing up.

2. Abortive activity An involvement which met the criteria for an activity segment except that it was less than four minutes in length.

Transitions described those segments of activity which occurred between play or scheduled activities, and were coded in one of two categories:

3. Non-official transition Not essential to the operation of the setting, not planned by adults or not essential to setting maintenance. For example, child gets drink of water.

4. Official transition Required by adult and essential to setting maintenance. For example, group toileting, moving group from indoors to outdoors.

If an official transition was four minutes or longer in length, it was coded as an activity segment and so labeled.

Reliability

During the pilot phase, observers were paired for all observations until we were satisfied that further clarification was unlikely or that reliability was satisfactory. Reliability was systematically checked as the study progressed, both because of the possibility of observer drift and because of a need to check reliability under the variety of conditions encountered in centers. Three reliability checks, using different observer pairs, were scheduled for each sample center.

Data are available on a total of 56 paired observations lasting from approximately 10 to 20 minutes, all obtained during the stage of active data collection. Cohen's Coefficient of Agreement (Cohen, 1960) was computed for each of 56 paired observations for the major categories of Rejecting, Thrusting, Responding and Integrating modes. This coefficient always is lower than a percent of agreement since it accounts for chance agreement. For the 56 observations, Cohen's k = 80.7%. The percent disagreement for all sub-categories ranged from a low of 0.1% to a high of 9.9% with a mean of 2.0%.

Using Wright's Estimate of Accuracy (Wright, 1967) 2/, there

2/ For observer A and observer B:

$$\text{Wright's Estimate of Accuracy} = \frac{\text{Episodes marked by A marked also by B}}{\frac{\text{Episodes marked by A + those marked by B}}{2}}$$

was 95.6% agreement on recognition of activity segments and 93.9% agreement on segment length. Mean percent of disagreement for all activity segment descriptors was 10.9. Detailed information on reliability calculations is reported in Prescott (1972).

Making Arrangements for Observations

Among day care centers with a community reputation for quality 3/ we sought a judgment sample of 14 centers, one half open structure programs and one half having closed structure, which would provide variety in sponsorship, size of center and clientele served.

The project director telephoned the administrator of each center which appeared to have the requisite characteristics for the sample, briefly explained the purpose of the study and asked for an appointment to visit the center to discuss our observational plan in greater detail. During the interview the project director decided whether the program had been accurately nominated as open or closed and was functioning normally. Three programs were eliminated because of possible instability due to changes in staff, scheduling or lack of time to develop a new facility.

Type of structure was determined both by our own previous experience or that of the licensing department or Children's Centers supervisory personnel, and by asking each center director the following question:

> There are differences of opinion about how a child's day should be planned. Some believe that teachers should make most of the choices, while others believe that it is important for the child to choose. How do you feel about this?

To amplify and clarify her answer, the director was then asked about the daily schedule.

Once the director agreed to the observations, a date was set for three successive days of observation, usually a Tuesday, Wednesday, and Thursday. The criteria for the selection of children were explained and additional information was obtained about the center and its schedule. A few days later the names of children to be observed were obtained by phone and a letter of explanation of our purposes and procedures was sent to each teacher in whose group we were to observe. (See Appendix B-2.)

3/ Community reputation for quality was based on several criteria: stability of operation, adequacy of funding and physical plant, sponsorship by recognized community groups.

The Sample

Centers

Of the seven open and seven closed structure centers selected, five were under public sponsorship, six non-profit and three proprietary. Six of the centers enrolled more than 80 children, six enrolled 40 - 65, one enrolled under 40. Still another housed its 120 children in three separated autonomous units. Six of the centers offered extended day care for older children.

Children

Within each center, six children were selected for observation from a panel of nine nominated by each center staff, 1/3 described as really thriving, 1/3 as average, 1/3 as not yet thriving as hoped in the program 4/. A balance between boys and girls along the age range from 2 to 5 years was sought by selection from the panel so nominated. (For sample characteristics, see Appendix A, Table 1.) The sample children were 68% Caucasian, 23% Negro, 5% Mexican American and 4% Oriental. Forty-nine percent came from one-parent, 51% from two-parent families. Socio-economic level of parents ranged from professionally employed to blue collar workers, some receiving welfare supplements. In this sample, race was not correlated with socio-economic status. Basic characteristics of clientele served did not differ between open and closed structure centers. Sex distribution was 44 boys, 40 girls. Mean age was 45.9 months. These characteristics did not differ significantly between open and closed centers.

Procedures for Observation

Five observers were used throughout the study. Each observer was supplied with a clip board containing forms for coding and a transistorized timing device with an ear plug designed to produce a click every 15 seconds which was audible only to the observer. At each click the observer coded the child's mode and direction of attention. Observers coded for 40 minutes and then were relieved by another observer. A 20-minute break was provided to mark activity segments. The second-level coding was filled in after each observation was completed.

4/ We first tried a method of random selection in which the director would list all children by age and thrive rating and permit us the choice. This proved most difficult and did not seem to improve the selection. Small centers did not present that much choice while the clerical work involved for the director of a large center made it impractical.

During the observation the observer attempted to remain as unobtrusive as possible. To avoid interruption the observer maintained silence and did not invite conversation with the children. Observers were systematically rotated throughout the study. They did not know the thrive ratings of the children they were observing. Two children were observed continuously each day for approximately two hours in the morning and one hour during the post naptime period making a total of 180 - 200 minutes for each child.

At the end of each day of observation, a staff member left a packet for the child's teacher containing the card sort of children's characteristics (Appendix B-1) and a short questionnaire (Appendix B-3) concerning each child who had been observed that day. The completed packet was picked up the following day.

Limitations of the Design

Since our sample was not randomly assigned to types of care or selected by a strict process of random selection, we are not concerned with formal hypothesis testing. Statistics are reported to assist the reader in evaluating the size of the differences which are reported. The Statistical Package for the Social Sciences programs, Campus Computing Center, University of California were used. For t-tests, either the separate or pooled variance estimate was used as appropriate (Nie , 1970).

CHAPTER 3

ANALYSIS OF OBSERVATIONS: CHARACTERISTICS OF CHILDREN

Age Differences

The age of a child has been considered a basic factor in organizing programs for young children. A common practice in day care centers is to group children in three age groups, roughly twos, threes, and fours. For the purposes of our sample we set the following limits: younger, 24 through 38 months; middle, age 39 through 48 months; and older, 49 through 61 months. In actual practice relatively few two year olds are placed in group care in Southern California and our experience has been repeatedly that it is difficult to get our desired sample of two year olds 1/.

The literature on child development and nursery school practices stresses the increase with age in physical coordination and the ability to play cooperatively. Our data show considerable evidence of these phenomena (Appendix A, Table 2).

Younger children were significantly higher on:

unintentionally intrudes (examples: child trips over table leg, child backs into another child's block building)

receives help: task oriented

total frustration

total non-focused engagement: includes not attending to external stimuli (such as thumbsucking), tentative behaviors (such as looking across the yard while fumbling with a puzzle), simple physical (such as running or trike riding unaccompanied by dramatic play or social interaction)

attention directed to the environment (rather than to persons)

activity segment label: standard creative exploring (examples: play dough, collage, easel painting)

program structure: toileting, wash-up

child's action during activity segment: physical and intellectual exploring (examples: the weather, a guinea pig, etc.)

1/ This is especially true in high quality centers where directors often set a lower limit of 30 to 33 months, both because they do not feel that group care is ideal for this age child and also because they can fill vacancies with older children.

Older children were significantly higher on:

gives orders

aggressively intrudes: playful (example: John greets James with a hearty "Hi" and punches him in the stomach)

exhibits mutual social interaction (example: Mary and John talk back and forth as they swing together)

exhibits hostile social interaction (example: Mary and John exchange insults as they swing together)

sees pattern, gives structure (example: child at carpentry table puts two boards together and says, "Hey, this could be a roof")

attention directed to child (rather than to environment or adult)

activity segment label: listening

social structure: one friend present

child's relation to activity structure: both adds and brings into focus. Child develops the activity segment by adding new components and tying them into a theme. (example: play with blocks is expanded when child adds animals and changes the play to running a farm)

child's action during activity segment:
large muscle
listening, looking
singing, dancing, finger play

There was a steady decline across the age groups in the incidence of unintentional intrusion such as stumbling over objects, dropping them, bumping into things. The incidence of receiving help declined steadily as age increased. Mutual social interaction showed a steady increase with age, being twice as high for four year olds as it was for two year olds. The percentage of attention directed to children also rose steadily with age.

Teacher ratings on the card sort showed significant differences between younger and older children in the following categories.

Younger children were more often rated as:

obeys easily

Older children were more often rated as:

seeks out other children rather than adults
often acts without thinking
gets into trouble with other children

Our findings on differences by age clearly replicated those described in the developmental literature and thus gave us some basis for establishing confidence in the validity of our other data as well.

In addition, the marked differences between the younger as compared with the middle and older age groups appear to offer support to the belief that day care, as it is commonly practiced, is not optimally designed for two year olds. Clearly, a day care program for younger children needs to provide for a high incidence of adult involvement and help. Also, children who have not yet developed competence in social skills cannot find the pleasure and cognitive stimulation from peer relationships that older children do. These considerations indicate that programming and probably also spatial arrangements for two year olds need to be different from those for older children.

Three year olds, like two year olds, continue to need a high level of adult help, but they differ strikingly from twos in their competence in social interaction. They are thus much more likely than twos to benefit from a group experience, provided adequate adult support is available.

Sex Differences

We examined differences in behavior by sex of child because it is an easily identifiable and frequently cited characteristic. According to common stereotypes of sex differences, boys are more active and interested in things; girls are more interested in people and feelings.

On our 15-second coding boys, as compared to girls, were significantly higher on the following (Appendix A, Table 3):

aggressively intrudes: playful
unintentionally intrudes
attention directed to environment

Girls were significantly higher on the following 15-second codings:

asks for help: affect oriented
receives help: affect oriented
attention directed to adult

The activity segment descriptors also reflected these differences. Boys rated significantly higher on:

much mobility
social structure: child alone
child's action during activity segment: large muscle
teacher approach: neutral
pleasureable affect

Girls more often were rated high on:

indeterminate mobility
child's action during activity segment: singing, dancing, finger play
moderate distress

Only three of the teacher card sorts showed a significant difference by sex and none of these related to our predictions or behavioral observations 2/.

In general these differences were in the predicted directions, but they were not extensive. Although boys directed more attention to the environment, and girls to adults, there was no significant difference in amount of attention to other children. Boys played alone more often, but they also engaged in more large muscle activity, and other data show that many large muscle activities such as swings and trike riding often tend to be solitary.

We had not anticipated the difference in affect that our data indicated. Boys appeared to be more independently and pleasurably involved and thus evoked much teacher response rated as neutral. Girls showed more distress, less pleasure, more attention to adults and more asking and receiving of help along affective dimensions.

The effect of the structure imposed by the center is apparent in two of the activity segment descriptors. On much mobility boys had significantly higher counts, but there was no difference between boys and girls on limited mobility, primarily, we suspect, because limited mobility tends to be imposed by the adult, not freely chosen by children. In like manner, there was no difference between boys and girls in the number of activity segments labeled as singing, dancing, only

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2/ Boys were rated significantly more often as:
needs time to get used to new situations
is easily distracted

Girls were more often judged as:
likes to make things, dough, collage materials, etc.

a difference in children's action during activity segment. This discrepancy probably is explained by the fact that boys often refuse to sing during activity segments labeled singing, while girls more often slip singing and dancing into activity segments bearing other labels such as dramatic play.

Differences By Thrive Rating

There were relatively few differences between thrivers, average, and non-thrivers on mode of behavior. However, the differences which were found appear important both for the child's future schooling and for his emotional well being. The major differences by thrive rating were found between thrivers and non-thrivers. Average children almost always fell between the two groups. (See Appendix A, Table 4.) They were closer to thrivers on those categories which indicate social competences, and closer to non-thrivers on cognitive behaviors.

Thrivers were significantly higher on:

shows awareness of cognitive constraints

total focused cognitive awareness: includes
(1) awareness of cognitive constraints (examples: "This wheel can't fit there; it has to go here." or "You have four blocks. I have only three.")
(2) awareness of social constraints (example: spontaneously putting a puzzle away before going on to another activity)
(3) sees pattern, gives structure (example: putting two pieces of wood together and recognizing possibilities for an airplane)

Non-thrivers were significantly higher on:

receives frustration, rejection, pain (examples: child is told by two children he approached, "We don't want to play with you." or, in answer to teacher's question about the color of a red ball, John volunteers that it is round. The teacher answers, "No, we are talking about color, not shape." In both cases, the child looks visibly upset.)

total frustration (includes both frustration and unintentional intrusion)

non-focused engagement (includes tentative behavior; not attending to external stimuli, i.e., thumbsucking, temper tantrums; and simple physical)

The coding for frustration and pain was used only when the child showed some visible disturbance in response to an incident 3/. If no negative reaction was noted, this coding was not used. It was this adverse response which appeared to differentiate thrivers from non-thrivers. For example, a thriver who had volunteered "round" when the correct answer to the teacher's question was "red", might reply, "Yes, it's red and round." Non-thrivers frequently shrank in timidity or hit back if struck by another child. A thriver was more apt to say calmly, "Hey, don't do that," or "Do you want to play?"

In this respect, thrivers as compared to non-thrivers appeared to possess two characteristics which contributed to their resistance to insults. One was their calm assurance that the intrusion, correction or rejection was friendly or accidental; the non-thriver was more apt to interpret it as malevolent. In addition the thriver could usually come up with a response which fitted the behavior into his friendly, trusting framework, while the non-thriver responded more often with hostility or helplessness. Thus, while non-thrivers were responding in ways which made people feel gauche or mean, thrivers continually responded in ways that made teachers and other children feel competent and good about themselves.

There were also differences in activity segment descriptors. Thrivers were more often involved in activity segments labeled as:

affectionate conversation
unusual cognitive activities

Non-thrivers were more often involved in activity segments labeled:

testing limits
structured transitions

3/ In this sense our coding was similar to that used by Faul (1963) and different from that used by Berk (1971) who coded every incident in which a child's purpose or wishes were frustrated regardless of his response. Consequently, the frequencies for this behavior in our study were comparable to those of Faul and much lower than those reported by Berk.

The child's action during activity segments of thrivers was more often rated as:

pleasure and delight
interference: none
high involvement

The child's action during activity segments of non-thrivers was more often rated as:

expressing anger, fear, discomfort or pain
interference with functioning due to teacher behavior, other children or scheduling
low involvement

There was no marked difference in amount of teacher instigation directed to the individual by thrive rating, but there was a difference in the amount of teacher pressure to individuals, with average children receiving the least and non-thrivers the most. The type of teacher behavior also differed. Thrivers more often experienced teacher input which was rated as friendly and emphasized consideration and mutuality. Non-thrivers more often received teacher input which was rated as irritable or insensitive and emphasized control and restraint.

It appears that thrivers possess both social and cognitive competence which enables them to achieve their own purposes and to receive positive reinforcement for doing so. Non-thrivers appear to possess less cognitive competence and also less facility in manipulating the social system. Those children who are rated as average appear more similar to thrivers in social interactions and more similar to non-thrivers on cognitive behaviors. Perhaps because of this difference in social competence they are subject to significantly less adult pressure than non-thrivers.

Teacher Card Sort

There were extensive and large differences between thrivers and non-thrivers on the teacher card sort. Based on the cells with zero ratings for the thrivers, it appears that a child will not be rated as a thriver if he is perceived by teachers as:

often appears clumsy
is not well-coordinated
does not play well with other children
is not usually cheerful, happy

Thrivers are much more often rated as possessing the following characteristics (chi-square at .001 level):

stays at activities until completed 4/
plays well with other children
is usually cheerful, happy
is cooperative
obeys easily
adapts easily to new situations (chi-square at .01 level)

Non-thrivers are more often rated as follows (chi-square at .01 level):

needs time to get used to new situations
is easily distracted
often appears clumsy
does not stay interested in one activity for long 4/
often acts without thinking
gets into trouble with other children
is slow to warm up - needs time to get into things

Teachers clearly saw non-thrivers as possessing negative characteristics, thrivers as possessing positive characteristics. The behavioral data showed some slight correlation to teacher perceptions, but the clearest trend of the behavioral data was the theme of unpleasant and less rewarding experience for non-thrivers.

4/ These ratings led us to predict that non-thrivers as compared to thrivers would have shorter activity segments and more abortive activity, but this was not the case. There were no differences in length of activity segments. In closed structure centers, non-thrivers did have somewhat more abortive activity than thrivers, but in open settings, where overall amount of abortive activity was significantly higher, non-thrivers had slightly less than thrivers.

CHAPTER 4

ANALYSIS OF OBSERVATIONS: PROGRAM STRUCTURE

Setting Differences: Open vs. Closed

All our observations of children were made in day care centers which we had previously designated as either open or closed. Our selection procedures were designed to differentiate among centers according to amount of choice permitted children in the initiation and termination of activities. However, there was a considerable range among centers classified as either open or closed. This range is shown particularly in the differences in teachers' preferred mode of intervention, pressure or initiation. Figure 1 (page 24) shows the range among centers according to who initiated and terminated activities 1/. As can be seen, in some centers there were considerably more opportunities not only for the child to initiate but also to decide when he was ready to end an activity.

There were also differences in the amount of teacher facilitation to children. (For example, a child is frustrated because he can't find a tricycle to ride and the teacher suggests that perhaps he would like to take a truck over to the sand pile.) In some centers such facilitation was infrequent while in others it was quite common. Facilitation occurred with greater frequency in open than in closed structure centers.

In spite of the range within types, the differences in program structure provided our most powerful predictor of differences in children's behavior. Contrasts appeared for a much broader range of indicators than was the case for any of the characteristics of children (age, sex, thrive rating).

There were differences in the ways in which children spent their time in open and closed structure centers. (See Appendix A, Table 5.) Children in open centers spent 70% of their time in activity segments (activities which last more than four minutes), and 16% of their time in abortive activities. Children in closed structure centers spent 64% of their time in activity segments and significantly less time (10%) in abortive activities.

There were no differences between centers in the percent of non-official transitions (such as getting a drink of water before going to the sandpile). However, there was a highly significant difference in the percent of time spent in structured transitions (those activities

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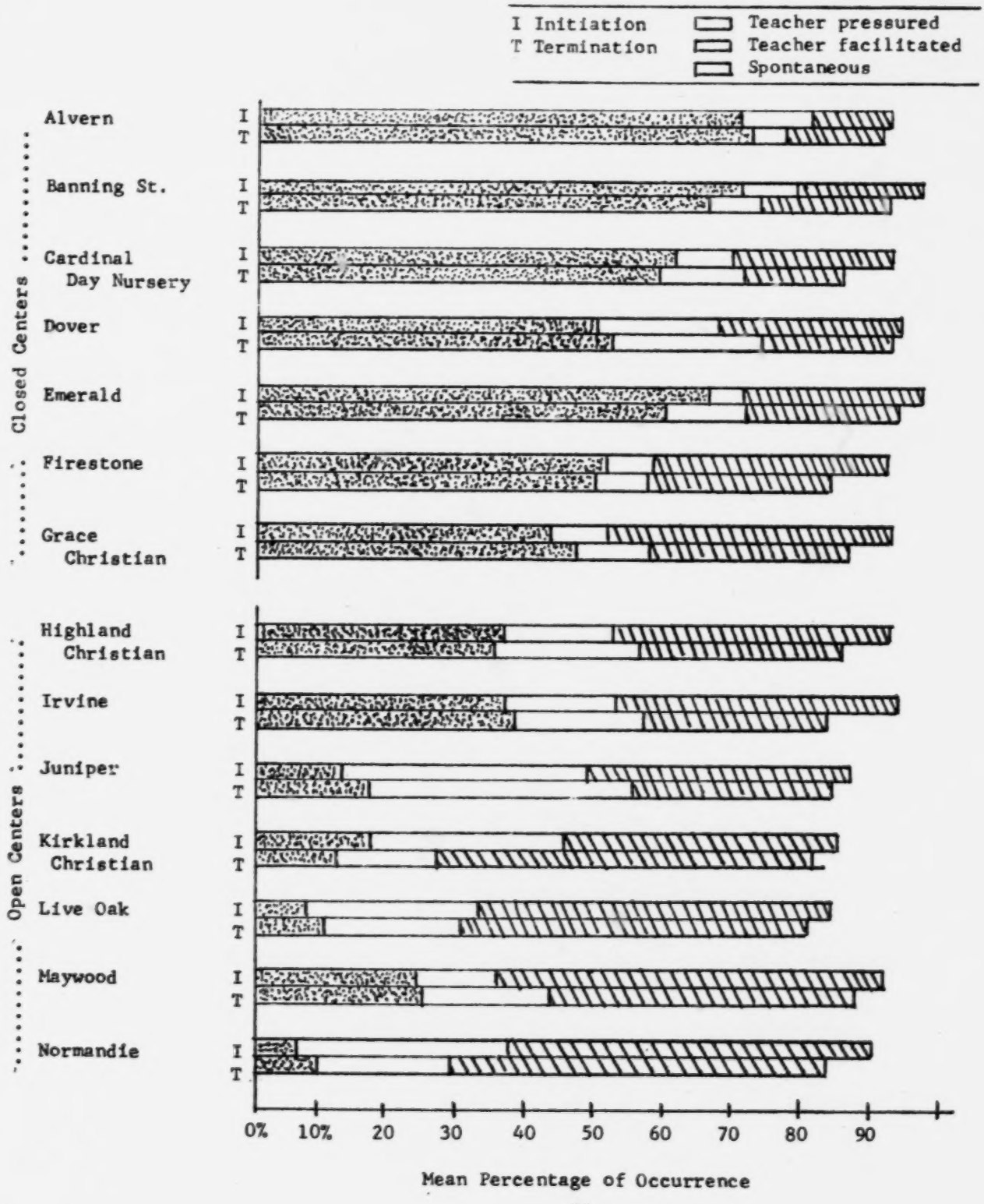
1/ These figures are somewhat less than 100% because the source of initiation and termination was sometimes unclear and coded as such.

FIGURE 1

SOURCE OF INITIATION AND TERMINATION OF ACTIVITY SEGMENTS



required by the setting such as group toileting, wash-up, waiting). Eleven percent of time in open centers was so spent. This figure rose to 22% in closed structure centers and in some centers exceeded 30%.

Children in open centers spent a somewhat larger portion of their time both in extended and in abortive activities. Open centers appeared to require more getting-started behavior (i.e., abortive activities) on the part of children. They also produced a larger percentage of children's involvement in activity segments. Closed centers, in contrast, organized nearly one-fourth of children's time in official transitions (clean-up, lining up, waiting for the next activity), leaving less time available for involvement in activities.

Adult-Child Ratio

Overall Adult-Child Ratio. Closed settings generally had fewer adults to children than open settings. Closed settings averaged one adult to ten children with a range of 1:8 to 1:12. Open settings averaged one adult to eight children with a range of 1:5 to 1:11. (In some of the open settings, the lower ratio was obtained by the presence of student teachers.)

Variation of Adult-Child Ratio. There was also a difference between open and closed structure centers in the distribution of adult-child ratios during activity segments. (See Figure 2, page 26.) Children in open settings were more apt to have activity segments with one adult to three or fewer children or with no adult involved. Children in closed settings had more activity segments with one adult to more than three children.

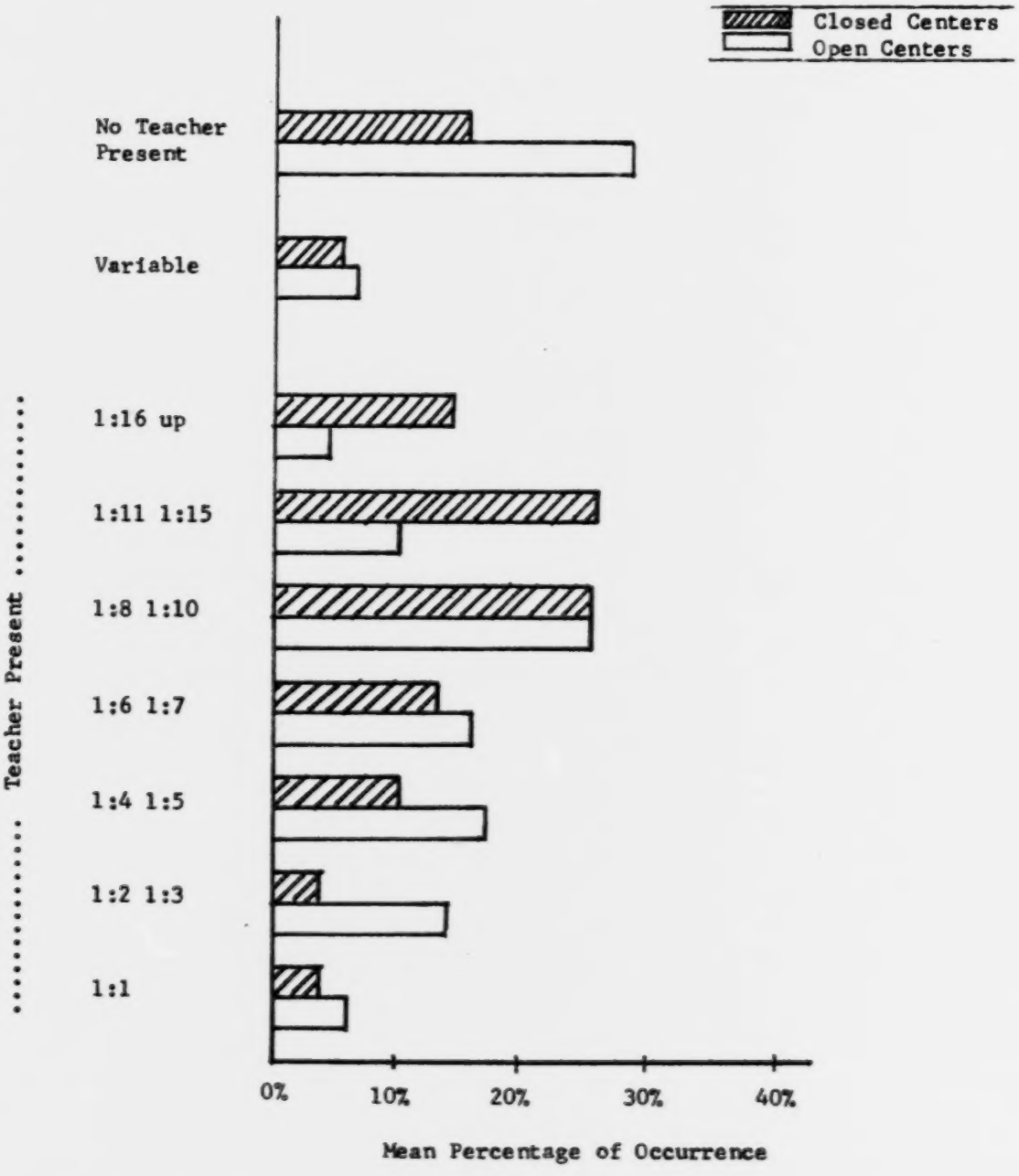
Softness Rating

There were also marked differences in many characteristics of physical space. These differences will be the subject of another monograph, but one, the Softness Rating, appears important to mention. It was named "softness" because it appeared to indicate the responsiveness of the environment to the child especially on a sensual-tactile level. The Softness Rating was based on the presence or absence of eleven components listed in order of their frequency of occurrence.

1. play dough
2. sand which children can be in, either a box or area
3. "laps", teachers holding children
4. single sling swings
5. grass which children can be on
6. large rug or full carpeting indoors

FIGURE 2

DISTRIBUTION OF ADULT-CHILD RATIO DURING ACTIVITY SEGMENTS



7. water as an activity
8. very messy materials such as finger paint, clay, mud
9. child/adult cozy furniture: rockers, couches, lawn swings
10. dirt to dig in
11. animals which can be held

Closed settings averaged three of these components per center while open settings averaged ten.

Differences in Behavior

Fifteen-second observations of children's behavior yielded many differences by program structure. (See Appendix A, Table 6.)

In closed settings children rated significantly higher on:

ignores intrusion
obeys, cooperates
gives stereotyped response (examples: standing in line properly but without attention; sitting through story time without attention)
responds to questions
shows awareness of cognitive constraints
tentative behavior (example: looking at what other children are doing while pasting a collage piece)
total responding behavior except looks, watches
attention directed to adults
adult input: pressure 2/
total adult input

In open settings children rated significantly higher on:

avoids intrusion (example: child moves his carpentry project to other side of the workbench to keep from being jostled)
is physically active
selects, chooses: task oriented (example: child selects truck from shelf)
asks for help: task oriented
gives information: task oriented (example: "I saw a red fire truck this morning.")
total thrusting behavior
sensory, tactile (example: swaying as teacher reads about wind blowing through trees)

Clearly, closed structure settings evoke large amounts of behavior in response to external demands. Adults in the settings also appear

2/ The ratio of adult pressure to facilitation for closed settings was two to one; for open settings, .70 to one.

to exert more demands and to evoke more attention from children. Open settings evoke more initiatory actions from children.

Activity Segment Descriptors

In closed settings children spent significantly more time in activity segments described as (Appendix A, Table 6):

indoors
activities labeled as imitation of prescribed patterns (reciting the alphabet), standard cognitive or structured transition
program structure: teacher-directed group activity or teacher-selected individual activity
play equipment type: closed: use of play objects which offer only one choice or have right answers (example: puzzles)
absence of complex or super units 3/ (examples: absence of water and toys in sandbox; absence of props to add to play in jungle gym)
little mobility
group with adult present
teacher approach rated as neutral or insensitive
teacher emphasis on sensory-motor and formal cognitive skills, control and restraint
teacher influence on play structure to close and eliminate alternatives
initiation and termination of activities by teacher pressure
presence of factors which interfere with functioning, such as scheduling, teacher behavior, etc.
minimal involvement

In open centers children spent more time in activity segments described as:

3/ And therefore only simple units present. A simple unit is a play unit that has one obvious use and does not have sub-parts or a juxtaposition of materials which enable a child to manipulate or improvise (examples: swings, jungle gym, rocking horse, tricycle).

A complex unit has two essentially different play materials which enable the child to manipulate or improvise (examples: sandbox with digging equipment; a doll house with furniture).

A super unit is a play unit which has three or more play materials juxtaposed (examples: a sandbox with digging equipment and water; a climbing unit with crawl boards and a blanket; a dough table with cookie cutters and toothpicks). For additional information see Kritchevsky and Prescott (1969).

outdoors
activity segment labeled:
    large muscle
    unusual creative exploring
program structure: free choice
use of props for house play and/or pretending
super units
play equipment type: open
much mobility
social structure: one friend or adult involved with
    individual/small group
teacher approach: sensitive or friendly
teacher emphasis:
    consideration and mutuality
    pleasure and delight
    creativity and experimentation
    multiple
teacher influence which opens inherent activity structure
initiation and termination of activities either adult
    facilitated or spontaneous
absence of factors which interfere with functioning

The descriptors for closed settings indicate that activity segments elicit a fairly narrow range of child behaviors which must be shaped to fit the specific demands of an activity. Teacher behavior tends to be non-personal and to concentrate on the requirements of the task.

In open settings the activity descriptors indicate that a wider range of behaviors could be elicited and be considered acceptable. Teacher behavior is more often directed toward encouraging children's response. The social structure permits more individual attention between children and between children and adults.

Card Sort

Teachers in closed structure settings differed significantly from those in open settings in rating six of the sort characteristics. They more often described children as:

* * is very interested in letters
* * is more interested in things than in people
* * is not unusually sensitive to loud noises
* * has a high energy level
* * enjoys task with clear cut rules
** ** needs time to get used to new situations (was either rated as very much like or very unlike)

* 5% level, ** 1% level of significance (chi-square)

This last sort category, in which the difference was primarily in the use of extremes, also applied to the card sort on energy level and clear cut rules. Teachers in open settings more often stated that these characteristics did not describe the child one way or the other, while teachers in closed settings said that these particular characteristics were very much like or not at all like the child. Although this difference may have been descriptive of differences in children, it appears possible that closed structure settings provide the conditions in which these characteristics of children are crystallized into more definite teacher judgments than in open centers.

Characteristics of Children by Center Type

Because of the differences in basic program structure, we had predicted that the characteristics of children would look somewhat different depending on the center type in which they were observed. Only data for sex and thrive rating are considered, as cell size for younger children was too small for meaningful analysis. (See Appendix A, Table 7.)

Sex by Center Type

In closed structure centers differences by sex were virtually nonexistent 4/. Although the direction of the differences was similar, the size of the differences was far greater in open centers. In open structure centers there were a number of significant differences by sex of children. Girls rated higher on:

asks for help: affect oriented
receives help: affect oriented
attention directed to adult
indeterminate mobility
teacher lets be inherent activity structure

Boys were higher on:

use of props for building and constructing
much mobility
teacher closes inherent activity structure (for example:
Three boys are taking a board and hammers into sandpile.
Teacher says, "You will have to take those things back
to the carpentry table.")
pleasurable affect

4/ Only one item, playing alone (for boys) reached significance.

It appears that one of the outcomes of the regulation in closed centers is to produce somewhat more homogeneity of behavior. The sex differences which characterize boys' and girls' approaches to the environment and to adults in open centers are masked in programs where all children are frequently expected to participate in activities selected by the teacher.

Thrive Rating by Center Type

Thrivers as a group possessed certain characteristics which differentiated them from non-thrivers. When differences by thrive ratings were exaimined in open and closed structure centers other differences emerged. (See Appendix A, Table 8.)

In closed settings thrivers rated significantly higher than non-thrivers on the following:

attends with concentration
plays with one friend
friendly teacher approach
teacher emphasis on pleasure and delight
no interference with functioning

Non-thrivers rated higher on:

aggressively intrudes: hostile
receives frustration, rejection, pain
total frustration
neutral or insensitive teacher approach
interference with functioning due to scheduling or teacher behavior
affect varies during activity

In open centers thrivers rated significantly higher than non-thrivers on the following:

shows awareness of cognitive constraints
social structure: adult involved with individual/small group
teacher emphasis on consideration and mutuality
child's action during activity segment: pleasure and delight, listening to stories, looking at books

Non-thrivers rated higher than thrivers on the following:

aggressively rejects
total rejection except ignores intrusion
social structure is variable during activity segment

In closed settings the differences between thrivers and non-thrivers appear to revolve around task interference with ensuing frustration and aggression. In open settings the differences appear to involve a series of avoidances, as indicated by the amount of rejection, low incidence of activity with adult present in individual involvement with the child, and change in social structure during activity. Non-thrivers also appear to avoid problem solving and engage less frequently in activities which produce pleasure.

A Postscript on Some Regularities Found in the Data

There are certain regularities in the data just presented which seem important to keep in mind. Certain modes consistently show a low frequency. Total rejection, for example, had a mean of 3.6% and never exceeded 10.1% for any child. All types of aggression had a very low frequency. The mean for the combined categories of aggressive rejection and aggressive intrusion was only .01%. Even children labeled as exceedingly aggressive spent most of their time in non-aggressive involvement. In like manner, the average incidence of receiving frustration and pain was 2.3% for the sample and did not exceed 7% for any child.

The low frequency of occurrence for aggression and frustration might seem somewhat out of line with the amount of attention given in the literature to these subjects. However, aggression can lead to swift adult retaliation and this, in turn, can lead to an infrequent but vivid coding for receives frustration, pain. A little frustration can go a long way, especially if the incident involves an adult. When such an incident occurred between an adult and one child, we were impressed by the total attention which it evoked from other children.

In contrast to these categories, looking-watching was high for all children in the sample (mean, 17.0%). Furthermore, it did not seem to vary systematically either by characteristics of children or by type of center. This mode is in marked contrast to one such as social interaction, which was very high for some children (22%) but by no means for all (low, 0.01%).

The category "attends with concentration" also was high for all children (mean 27.0%). The lowest child in the sample had 13.0% Obviously, even the most distractible child spent considerable time involved with an activity. Also it proved impossible to predict the quality of a child's play from this variable. A low count might mean that a child did not stay with activities; on the other hand, it might mean that a child was really testing out possibilities and was accumulating a large count of other variables in the integrative mode. Karen, whom we shall describe, provides a good example of this variety of integrative activities. In like manner, if a child's count was high it might be because he was highly involved in a complex activity or because he was rigidly stuck on a simple one.

Direction of attention also provides some consistencies worth noting. Throughout the sample the average amount of child's attention directed to the environment was 48%. The range was from 24% to 63%, so that even the lowest child in the sample was spending considerable time involved with the physical world. The remainder of a child's time was in some type of interpersonal involvement. It appears that the figure for interpersonal involvement remains fairly constant and shifts much more easily from adult to child or vice versa than to the environment.

In like manner the ratio of total thrusting to responding was approximately 1 to 1.4 for the sample. It varied markedly among individual children, but also varied systematically by type of care. A few children in open centers were low on thrusting and high on responding, while some children in closed centers presented the opposite picture. However, the overall effect of center structure was to enhance thrusting, if open, and responding, if closed.

CHAPTER 5

PATTERNS OF CHILDREN'S BEHAVIOR

In the data just presented we have described certain relationships between characteristics of children and the program structure of day care centers. It seemed likely that there would be common elements of children's style of behavior, within the structure provided by group day care programs, which would enable us to identify typical patterns of children's behavior in day care. Three separate factor analyses were performed on (1) mode of behavior, (2) activity segment descriptors, and (3) teachers' card sort of children's characteristics 1/, 2/. Only factor loadings of .28 or larger are presented in the data which follow.

Child's Mode of Behavior

The factor analysis of children's mode of behavior, using 46 variables, yielded five factors. Each factor describes a dimension on which the behavior of some children in day care differs from that of other children.

As we have previously described, some of these behaviors vary markedly with differences in program structure. In other words, open or closed structure may foster one or another type of behavior in many children. However, some behavior seems to be a more direct function

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1/ The SPSS factor analysis program using a principal components solution was utilized for all factor analyses. (Nie, N.H., et al, 1970)

2/ We hope that readers who are unfamiliar with factor analysis will not skip this chapter. Factor analysis is a procedure for reducing large amounts of data to a more comprehensible form. It is based on the correlations of each variable with every other variable. The patterns which are formed by these consistencies of association are described as factors. The strength of a factor can be ascertained from the percent of variability which it accounts for. (The higher the percentage, the stronger the factor.)

Most of the factors reported here have two clusters of variables; one is a group of positive correlations, the second, a group of negative correlations. (The terms "positive" and "negative" are mathematical conventions, not moral judgments.) For the factor being described, this means that the variables in one cluster tend to occur together and in the absence of those in the other cluster. The higher the loading for a variable, the greater its weight or contribution to the factor. If this isn't clear, look at Factor I:1 before you give up. It describes patterns in the behavior of real children in day care.

of children's own characteristics -- for example, age or temperament -- which may be modifiable, but not possible to eliminate, through programming. As in all concern for quality in day care, finding an appropriate match for an individual child is the primary consideration.

Factor I:1, Active Involvement vs. Passive Response

(This factor accounts for 34.7% of the variability)	Loading
Total of all thrusting behavior	.79
Gives information: task and affect oriented	.68
Total of all rejecting except ignores intrusion	.67
Actively eliminates or negates	.65
Gives orders	.60
Asks for help: task oriented	.58
Total of all asking and receiving help	.57
Aggressively rejects	.43
Asks for help: affect oriented	.39
Selects, chooses	.36
Total of aggressive rejecting, hostile behavior	.35
Total of receives help	.35
Sess pattern or gives structure	.34
Imitates	-.29
Total of all responding behavior except looks, watches	-.30
Obeys, cooperates	-.38
Not attending to external stimuli	-.43
Gives stereotyped response	-.51
Tentative behavior	-.60
Looks, watches	-.60

The strongest factor appears to differentiate between those children who are actively trying to shape the environment and other people to their purposes versus children who are primarily responders and are being shaped rather than actively asserting themselves. The active children initiate for themselves; they tell people what they are doing and thinking and feeling, and place effective demands on others for cooperation or help. They are able to reject directly, often aggressively, input which fails to fit into their scheme of things. They see and can verbalize the patterns in their world.

In contrast, the responsive children approach their environment tentatively -- watching, often failing to commit themselves to action. They are more likely to do what they are told or shown to do than to decide for themselves.

This factor also reflects differences in program structure. The first cluster describes those behaviors which occur with greater

frequency in open structure programs; the second cluster describes those which are more common in closed structure programs.

Factor I:2, Attention Directed to Environment vs. Attention Directed to Adult

(This factor accounts for 20.6% of the variability)	Loading
Attention directed to environment	.70
Is physically active	.57
Selects, chooses	.48
Total of all thrusting behavior	.43
Non-focused engagement	.41
Adds something new	.35
Imitates	-.30
Adult instigation to individual	-.35
Gives stereotyped response	-.44
Responds to questions	-.50
Adult pressure to individual	-.58
Obeys, cooperates	-.66
Total adult input	-.70
Total of all responding except looks, watches	-.81
Attention directed to adult	-.84

The second factor describes the constellation of behaviors involved when the child pays primary attention to the environment, in contrast to those involved when his attention is directed to the adult. The child whose attention is directed to the environment is actively engaged although the involvement may lack focus. High attention to adults is characterized by responsive behaviors on the child's part and high adult input, particularly in the form of pressure. Again this factor describes behaviors which are related to program structure. The first cluster occurs with free choice in settings which offer much mobility. The second cluster describes behaviors common to teacher-directed group activities.

Factor I:3, Younger vs. Older Children

(This factor accounts for 19.3% of the variability)	Loading
Receives help: task oriented	.66
Total of asking or receiving help	.61
Attention directed to environment	.47
Tests, examines	.42
Adult instigation to individual	.31
Unintentionally intrudes	.31
Selects, chooses	.29
Not attending to external stimuli	.29
Total of aggressive rejection, hostile behavior	-.37
Aggressively intrudes: playful	-.42
Exhibits mutual social interaction	-.74
Attention directed to child	-.76

This factor appears to differentiate between younger and older children. At one pole are those behaviors which accompany dependence on adults and exploratory engagement with the environment. At the other pole are those behaviors -- reciprocity, intrusion and rejection -- which occur with active social involvement between children.

Factor I:4, Focused vs. Diffuse Behavior

(This factor accounts for 13.3% of the variability)	Loading
Focused cognitive awareness	.94
Sees pattern, gives structure	.66
Shows awareness of social constraints	.64
Shows awareness of cognitive constraints	.62
Adds something new	.45
Tests, examines	.32
Is physically active	-.30
Tentative behavior	-.37
Non-focused engagement	-.59

The fourth factor appears to describe children who show a high degree of cognitive competence. Their behavior is characterized by restructuring, innovation, systematic exploration, and recognition of both cognitive and social constraints. The behavior of the contrasting group of children is notable for its absence of purpose or theme.

Factor I:5, Frustrating Engagement

(This factor accounts for 12.0% of the variability)	Loading
Total frustration	.86
Receives frustration, rejection, pain	.79
Adult pressure to individual	.57
Aggressively intrudes: hostile	.50
Total of aggressive rejection, hostile behavior	.45
Ignores intrusion	.43
Unintentionally intrudes	.41
Obeys, cooperates	.30
Total adult input	.29
Adult instigation to individual	-.29

The final factor was not bi-polar. It describes those behaviors which appear associated with frustrating engagement, but provides no contrasting set of behaviors. This factor gives a description of those

children, typically non-thrivers, who were frequently in conflict with others, both receiving and giving a relatively large amount of rejection. Subjected to a high level of adult pressure, they respond variously by aggression, ignoring, and, to a lesser degree, obedience.

Activity Segment Descriptors

The second factor analysis was performed on activity segment descriptors. Sixty-six variables were selected. They yielded five factors, each relating certain aspects of children's behavior to aspects of teacher behavior and the physical environment of the center.

Factor II:1, Child vs. Teacher Initiation

(This factor accounts for 50.3% of the variability)	Loading
Spontaneous initiation	.80
Spontaneous termination	.78
Play equipment type: open	.72
Teacher emphasis: consideration and mutuality	.45
Much mobility	.45
Activity segment label: large muscle	.43
Social structure: adult involved with individual/ small group	.42
Physical setting: super unit	.34
Teacher lets be inherent activity structure	.31
Social structure: children present	.29
Activity segment label: unusual creative exploring	.29
Social structure: child alone	.28
Activity segment label: structured transition	-.32
Teacher closes inherent activity	-.33
Activity segment label: standard cognitive	-.57
Activity segment label: imitating	-.57
Little mobility	-.59
Teacher emphasis: formal cognitive skills	-.63
Play equipment type: closed	-.67
Termination is adult pressured	-.75
Initiation is adult pressured	-.78
Social structure: group with adult present	-.84

This factor was clearly the strongest of the five factors. It describes a widely prevalent set of alternative ways of structuring activities in day care programs. It parallels our original criterion for differentiating open and closed centers, namely, whether activites are initiated and terminated by children or by the teacher. The

factor analysis, it should be noted, describes characteristic differences between activity segments initiated by teachers and those initiated by children in both open and closed centers. Both types of initiation occur in both types of centers; the difference is quantitative.

Activities initiated and terminated by children are most likely to be high-mobility, involving open play equipment. A non-interfering adult and other children may or may not be in the immediate vicinity. The typical characteristics make it clear that these are frequently outdoor activities.

Activities initiated and terminated by an adult typically involve the total group, engaged in a cognitive "lesson" controlled by the adult, or in a prescribed transition period. Characteristically, freedom of movement is not permitted.

Factor II:2, Facilitative vs. Restrictive Teacher Behavior

(This factor accounts for 17.5% of the variability)	Loading
Teacher approach: sensitive, friendly	.67
Teacher emphasis: multiple	.53
Indeterminate mobility	.52
Teacher lets be inherent activity structure	.46
Child's action during activity segment: physical and intellectual exploring	.42
Social structure: adult involved with individual/ small group	.37
Teacher opens inherent activity structure	.37
Teacher emphasis: knowledge and awareness of the world	.37
Teacher emphasis: pleasure and delight	.33
Child's action during activity segment: pleasure and delight	.32
Teacher emphasis: consideration and mutuality	.31
Social structure: children present	-.37
Little mobility	-.42
Activity segment label: closed creative exploring	-.46
Child's action during activity segment: constructing, building	-.50
Teacher closes inherent activity structure	-.61
Teacher emphasis: social rules, control and restraint	-.64
Teacher approach: neutral, insensitive	-.67

The second factor compares the circumstances under which teachers are likely to approach children in a warm and sensitive manner, with those in which teacher approach is typically neutral or insensitive.

Warm teacher behavior occurs when teachers are not pressuring children -- when they are encouraging pleasurable exploration and not participating actively except to facilitate social interaction or provide useful information. (Such participation requires teachers to be alert and perceptive observers.)

In contrast, teachers who are directing structured construction or art activities, with children seated at tables, are much more likely to emphasize rules of behavior and to approach children in a neutral or insensitive manner.

Factor II:3, High vs. Low Involvement

(This factor accounts for 14.2% of the variability)	Loading
Pleasurable affect	.82
High involvement	.68
Child's relation to activity structure: sets limits	.47
Child's action during activity segment: making social contact	.44
Child's action during activity segment: multiple	.44
Much mobility	.35
Social structure: one friend present	.34
Activity segment label: dramatic play	.32
Teacher lets be inherent activity structure	.29
Play equipment type: open	.28
Teacher closes inherent activity structure	-.29
Little mobility	-.34
Interference: task exceeds child's skill	-.34
Child's relation to activity structure: accepts as is	-.39
Activity segment label: closed creative exploring	-.41
Interference: task does not challenge, or scheduling or other people interfere	-.44
Social structure: child alone	-.46
Neutral affect	-.70
Low involvement	-.70

This factor describes the circumstances which accompany zestful involvement in activities, as opposed to those which are associated with lower involvement and more neutral or negative feeling tone. Pleasurable affect and high involvement are strongly associated with social interaction and with child's ability to give focus and set limts. (For example, finding a theme for dramatic play.) Low involvement and neutral affect are associated with solitary involvement in tasks which present little choice under conditions of low mobility.

Factor II:4, Child Restricts and Teacher Facilitates vs. Child Facilitates and Teacher Restricts

(This factor accounts for 10.3% of the variability)	Loading
Initiation is adult facilitated	.63
Termination is adult facilitated	.51
Teacher approach: sensitive, friendly	.50
Child's relation to activity structure: accepts as is	.47
Activity segment label: eating	.41
Teacher emphasis: creativity and experimentation	.39
Teacher opens inherent activity structure	.32
Teacher emphasis: pleasure and delight	.32
Child's relation to activity structure: sets limits	.31
Teacher emphasis: knowledge and awareness of the world	.28
Child's action during activity segment: dealing with emotion	-.32
Child's action during activity segment: multiple	-.38
Play equipment type: closed	-.38
Activity segment label: structured transition	-.38
Teacher emphasis: social rules, control and restraint	-.44
Termination is adult pressured	-.48
Teacher approach: neutral, insensitive	-.50
Initiation is adult pressured	-.52
Interference: task does not challenge, or scheduling or other people interfere	-.52
Child's relation to activity structure: adds possibilities	-.57

This factor appears to describe two circumstances which can arise in dealing with children. At one pole are children who are responding in a passive or limited way, approached by a teacher who is trying to involve the child and expand his play. At the other pole are children who are innovating and adding possibilities which the teacher chooses to restrict and limit.

Factor II:5, Complex vs. Simple Outdoor Play

(This factor accounts for 7.7% of the variability)	Loading
Child's relation to activity structure: both adds and brings into focus	.73
Physical setting: super unit	.47
Activity segment label: dramatic play	.47
Teacher emphasis: consideration and mutuality	.40
Indeterminate mobility	.34
Activity segment label: closed creative exploring	.32
Child's action during activity segment: multiple	.31
Child's relation to activity structure: accepts as is	-.33
Much mobility	-.39
Activity segment label: large muscle	-.62

This factor appears to describe two possible alternatives for outdoor free play. At one pole are children in yards which permit or encourage complex play. At the other pole are children for whom outdoor free play functions as a recess period in which large muscle activity is unaccompanied by elaborate play themes or complex exploring.

The Teacher Card Sort

The final factor analysis was performed on the thirty-six variables which composed the card sort on characteristics of children which teachers completed for all children in the sample. (For the complete list of thirty-six variables, see Appendix B-1.) The analysis describes types of individual children as seen by their teachers. It yielded three factors.

Factor III:1, Adjustment vs. Non-Adjustment to the Day Care Setting

(This factor accounts for 49.8% of the variability)	Loading
Obeys easily	.85
Is cooperative	.81
Stays at activities until completed	.60
Plays well with other children	.48
Moves slowly, likes quiet activities	.37
Is usually cheerful, happy	.36
Adapts easily to new situations	.34
Draws other people to him	.33
Finds it difficult to shift from one activity to another	-.31
Often appears clumsy	-.35
Is easily distracted	-.41
Likes vigorous, active play	-.42
Is often grumpy	-.62
Does not stay interested in one activity for long	-.63
Is often emotional	-.67
Often acts without thinking	-.72
Gets into trouble with other children	-.84

The strongest factor appears to describe the characteristics which are important in adapting to the social demands of group participation. It distinguishes children who are cooperative, friendly and cheerful, steady and relatively quiet -- all characteristics which appear to promote good adjustment in day care -- from children who have difficulty relating to other children and to program transitions, are mercurial, vigorous, and open in expressing their negative feelings.

Factor III:2, Sureness vs. Caution

(This factor accounts for 37.6% of the variability)	Loading
Is often the leader	.70
Keeps track of everything	.68
Likes to be the leader	.64
Is well-coordinated	.57
Has a high energy level	.53
Likes to figure out how things work	.47
Is very interested in letters, numbers	.47
Likes vigorous, active play	.43
Draws other people to him	.39
Stays at activities until completed	.31
Needs adult support	-.33
Moves slowly, likes quiet activities	-.33
Is slow to warm up, needs time to get into things	-.35
Needs time to get used to new situations	-.41
Is easily distracted	-.44
Often appears clumsy	-.53

The second factor appears to describe those variables which are associated with a confident approach to a group setting, as opposed to those which reflect caution, hesitation or ambivalence. The confident child tends to assume leadership and maintain active, competent involvement with things and people in the environment. The cautious child is often poorly coordinated, has trouble getting and staying involved, and needs time and support to function well.

Factor III:3, Independent Peer Involvement vs. Social Timidity

(This factor accounts for 12.6% of the variability)	Loading
Seeks out other children rather than adults	.63
Adapts easily to new situations	.53
Is usually cheerful, happy	.51
Draws other people to him	.41
Plays well with other children	.35
Has a high energy level	.34
Is often the leader	.32
Is more interested in people than in things	.32
Likes pretending and dramatic play	.28
Seems unusually sensitive to loud noises	-.30
Moves slowly, likes quiet activities	-.39
Often plays alone	-.42
Needs adult support	-.52
Seems more comfortable with adults than with children	-.54
Is slow to warm up, needs time to get into things	-.58
Finds it difficult to shift from one thing to another	-.60
Needs time to get used to new situations	-.68

This factor appears to describe children who actively seek out relationships with other children, as opposed to children who are more reserved and cautious in their social relationships, avoiding stimulation and seeking privacy or adult support.

Summary of the Factor Analyses

The first factor analysis described (1) two patterns of children who are high on active investigation and involvement with the world as opposed to children who respond to a narrower and prescribed range of stimuli (I:1, I:2); (2) children who look for support and help from adults as opposed to children who seek involvement with other children (I:3); and (3) two patterns of contact with the environment, one in which there is focus versus lack of focus in the environment (I:4), another in which there is frustration and interference with task accomplishments (I:5).

The second analysis described activity segments in which (1) there was a high amount of choice by children versus control of activity segments by teachers (II:1); (2) teachers were warmly involved with children in flexible and creative ways versus more distant and less warm teacher response in which limits, control and restraint were emphasized (II:2); (3) child's involvement was high versus those where child's involvement was low (II:3); (4) certain types of settings were seen (two patterns) in which teacher behavior served to facilitate limited child involvement or served to restrict innovative involvement (II:4); (5) two different modes of outdoor free play were contrasted, one complex and focused, the other characterized primarily by high mobility (II:5).

The final analysis, the teacher card sort, presented three patterns: (1) children who possessed social adaptability were compared with those who lacked this competence (III:1); (2) children who possessed confidence and freedom to approach tasks were compared with those who were cautious or fearful (III:2); and (3) children who possessed interest and skill in play with other children were compared with those who did not possess these interests or skills (III:3).

The factor analyses provide greater specificity in our understanding of typical patterns formed by those variables we have predicted to be significant in assessing children's experience in group day care. In the first presentation of data (chapters 3 and 4) we looked at the effects of variation in two major dimensions:

(1) characteristics of children: age, sex, and thrive rating
(2) program structure: open and closed

All these variables, with the exception of sex, appear clearly in one or more of the factors identified in our analyses. On some factors both of the contrasting poles appear to offer workable patterns for a good day care experience. More often, one pole appears to be comprised of a set of characteristics likely to produce non-thrivers in day care, unless real awareness of individual differences can be incorporated into the program.

Characteristics of Children

Factor I:3, Younger vs. Older Children, provides a straightforward description of characteristic differences by age.

A number of the factors seem to be delineating characteristics which predict thriving or non-thriving by children in day care, notably I:4, Focused vs. Diffuse Behavior; I:5, Frustrating Engagement; III:1, Adjustment vs. Non-Adjustment to the Day Care Setting; and III:2, Sureness vs. Caution. While program structure is a significant factor influencing the thriving of individual children, some children appear unlikely to thrive in any group care setting.

Program Structure

Factor II:1, Child vs. Teacher Initiation, distinguishes clearly between open and closed program structuring. Both poles of this factor appear to describe valid ways of structuring program in group day care. It is evident, however, especially through looking at some of the other factors, that a program heavily concentrated at one pole or the other may fail to provide a productive environment for some children. Closed structure seems particularly pressureful for the actively involved children of Factor I:1, frustrated children of I:5, and the non-adjusted children of Factor III:1. Teachers in closed settings are less likely to be warm and sensitive (Factor II:2) and children less likely to be involved (Factor II:3) except where the task is well suited to their interest and competence. On the other hand, open structure, unless it provides amply for privacy and adult support, may overstimulate and confuse the diffuse child of Factor I:4, the socially timid child of Factor III:3 and the cautious child of Factor III:2.

CHAPTER 6

A LOOK AT REAL CHILDREN

There were real children behind the data which have been presented. We have arbitrarily selected four centers, two open and two closed structure, and, in each center, examined the records of three children who had received the labels of non-thriver, average and thriver 1/.

Children at Dover

Dover was selected as a good example of a closed structure center. It is a medium sized Board of Education Children's Center which serves large numbers of children from one-parent families in the black community. The center did not have much equipment, either indoors or outdoors, which was easily available to the children. At the time we observed, the outdoor space was exceedingly bare, partly because of a vandalism problem. There was a jungle gym, tricycles, and some table toys. This center, like many other Children's Centers, had no swings. Indoors, tables which were used for eating occupied one room. Much of the equipment was in locked cupboards. Another room was kept relatively bare so that cots could be put down. The center was lacking in cozy corners and gave the feeling of large expanses of rather barren space.

ever, the teachers were lively and impressed us as being really concerned with providing an educational experience for children. There was a nice feeling of staff solidarity. Many of the games and activities used by the children had been made by the teachers and conveyed a sense of caring that is missing in many centers.

Darrell, A Non-Thriver

Darrell was 42 months old. He lived with his mother 2/. His teacher commented that he was over protected by his mother and grandparents, that he apparently had no children of his own age to play with and that he was very stubborn. Darrell had a stocky build and appeared physically clumsy and awkward as if he had not often experienced complete freedom of movement. Our observations of him gave the following picture.

Darrell was strikingly low on all thrusting behavior; he gave virtually no orders and expressed few opinions. He was also exceedingly low on mutuality in social interaction and on amount of attention directed to other children.

1/ The centers and the children have been renamed.

2/ There was no relationship between thrive rating and father absence for the sample.

Darrell spent most of his time either in active play with simple, open equipment or in tasks with closed equipment and limited mobility. He did not engage in any activities decribed as exploring. Although he rated relatively high on dramatic play, this did not seem to involve him with other children. He was exceptionally high on obeying and on stereotyped behavior such as staring out of the window during story time. He characteristically evoked neutral teacher approach and teacher emphasis on control and restraint. The teacher never tried to open or expand the possibilities for him. Interestingly, Darrell did try to open possibilities, which the teacher closed or limited more than 50% of the time. Interference with functioning for him was high.

Darrell's efforts to open activities which the teacher closed, resulting in high interference with functioning, summarized a great deal of his interaction with adults. It appeared to the observers that Darrell very seldom took the initiative when he was free to do so and that he lacked know-how in approaching other children. On the other hand, he took a great deal of initiative in the very settings where it was not permitted, so that he ended up receiving large amounts of restriction from teachers who really were exceedingly concerned and cared about children's progress.

During outdoor free play, Darrell spent much of his time in the yard riding on the tricycle. During the first morning in which we observed, Darrell rode around and around on his tricycle while the teacher talked with the observer about all of the things which Darrell did not do. He did not play well with other children or follow directions or stick to activities. The teacher seemed especially concerned about his lack of competence with language and said that he always gave the wrong answers and did not speak up in the group. Although observers ordinarily did not talk with the teachers, it would have seemed impossibly rude to ignore this one. The observer asked if Darrell could ever put into words what he was doing. For example, "Right now, he's riding a tricycle. Do you think he could tell you about what he does?" Much to the discomfort of the observer, the teacher called him over and proceeded to ask him what he was doing. Darrell looked somewhat surprised at being asked and gave her a long story about being a bus driver, climbing a mountain with a bus full of people who were going to a party. He was obviously involved in quite elaborate dramatic play, unbeknown to anyone but Darrell.

Darrell's play did not lead him into contact with other children, and the teacher did not seem to define the time in the yard as one which required facilitation of children's play. She acted primarily as observer and rule-enforcer. She repeatedly stopped Darrell when he rode to the far end of the yard, which was off-limits. He was supposed to stop at the end of the building. It was not clear to the observer whether Darrell chose to ignore the restraint, forgot about it or really

did not understand. Another observer commented, "Is Darrell often testing limits in a round-about sort of way? Much of his behavior makes sense under this label. Yet, when I saw it occur, there was an aura of doing the wrong things because he couldn't remember the right. He seemed to unthinkingly wander into the wrong area."

At group time we observed the following behavior. There was a lesson on families in which the teacher talked with the children about what daddies do. The teacher commented that daddies mow lawns. Darrell shook his head signifying "No, daddies don't mow lawns." The teacher responded, "Darrell, of course daddies mow lawns!" From then on, Darrell's attention lagged and he stared out the window. As part of the family lesson, children were to go to the board and point to the family member whom the teacher named. Darrell was asked to point to the sister; he went up and pointed to the daddy. The observer suspected that he had deliberately given the wrong answer. Yet it was a bit difficult with Darrell to be sure.

Later the teacher passed out books for the children. Darrell immediately reached for his as it was placed before him and was called down by the teacher who reminded him that his hands were supposed to be in his lap. When it was time to handle the book he did it lethargically and without interest.

It appeared to us that Darrell needed several things which were hard to provide in this center. One was real help in getting started in establishing relationships with other children. This setting simply did not place high priority on this particular kind of skill and left it very much up to children to make their own way with other children. The physical setting offered few freely available toys and therefore led to considerable conflict and teacher-imposed rules over sharing.

Darrell also appeared to need some individual communication with an adult in which the adult could, from time to time, tune in on what Darrell was playing and thinking about, validating his experience and helping him extend it further. Those interactions which we observed tended to push him toward concealing or denying his own ideas, rather than giving him a chance to talk and clarify for himself, and for others, who he was and where he was at. For example, if you are convinced that daddies do not mow lawns and you are up against a teacher who insists that they do, there is a credibility gap which is sometimes fairly difficult for a child to resolve. Frequent experience with such discrepancies is likely to reduce, rather than increase, a child's curiosity and functional intelligence.

Devon, An Average Child

Devon was 60 months old. He lived with his father and mother and one older brother. As one observer commented, "This is the kind of child you would choose over all the rest in the orphanage." He was slender, dark haired, well-coordinated, with big brown eyes. The center staff commented that he was extremely over-protected at home.

Devon had about the same amount of total thrusting and responding behaviors as did Darrell. However, they were quite differently distributed. Devon had a much lower count of simple physical thrusting and a good balance of behaviors distributed throughout other categories such as giving opinions and playful intrusion. He was also considerably lower on the amount of obeying. He spent a good deal of time looking and watching. He was particularly high on tentative behaviors, nearly twice as high as Darrell and about six times higher than Karen (the thriver to be described next). It was this quality, along with a relatively low percentage of pleasurable involvement, which probably caused him to be rated as an average child rather than as a thriver.

During a science lesson in which the teacher had presented a variety of sprouting plants and had raised good questions about the differences, there had not been enough time for slow starting Devon to explore or satisfy his interests. He peered intently at the tray full of sprouting seeds, potato eyes, etc. He wanted so badly to get his hands on those fascinating growing things, and he lingered long after the teacher had put them aside ending the activity. The teacher considered the activity finished when she had completed her demonstrations. Devon clearly was not ready to stop and had just begun to move in to examine things for himself.

His typical approach to activities was to hover around the fringes, although he was capable of intense involvement. During a morning activity with picture cards, in which the teacher would hold up the cards and the children were to call out the name of the object, he always had the right answer -- bubbling over with joy calling out the name and never missing a shot! He was fascinated with the dramatic play which ensued when the teacher allowed children to do their own thing with puppets. He had somewhat less luck with the flannel board which he was using in a creative fashion, putting numbers and shapes on it to make an interesting design. The teacher came along and said, "No, that isn't the way." (to give her proper credit, she did it gently!) and showed him the right way to put the numbers on the board. His enthusiasm dampened, he nevertheless politely adapted to the exigencies of the moment.

Devon seemed particularly aware of the scolding and punishment which sometimes occurred in this center. Although he was not ordinarily the recipient of more than a mild rebuke, observers noted several times that he looked visibly frightened when another child was scolded.

Although he had about the same percentage of attention directed to other children as Karen, he was much higher on amount of social interaction. He was capable of long and sustained involvement with other children in a non-dominating manner and did not attempt to take command of every social situation as Karen sometimes tried to do. Devon made very good use of the free play time, typically using it for dramatic play with other children. His play was often interrupted, however, by the shortage of equipment. For example, at one time he got off his tricycle to pretend that he was going to a gas pump to fill it. Another child grabbed the tricycle and this was the end of his play. It appeared to us that a child such as he would have made particularly good use of a large number of props which would have facilitated complex dramatic play.

Karen, A Thriver

Karen was 36 months old. She was an only child from a two-parent family. The staff commented that she was displeased when she was not the center of attention. Karen was small, wiry, full of energy and "cute". Karen's behavior was different from Darrell's in important respects. Unlike Darrell, she was high on thrusting behaviors. She gave orders and opinions. She obeyed only one-half as often and was low on stereotyped responses. Her incidence of mutuality in social interaction was four times as high as Darrell's. She was also high on recognition of social and cognitive constraints.

Karen engaged in considerable creative exploring and in dramatic play. She made much more use of complex play equipment than Darrell. Most of her time outdoors was involved in dramatic play with other children.

Karen also knew how to get attention from adults. She was one of the highest-rated children in our sample in amount of attention directed to adults. Furthermore, she evoked friendly and sensitive teacher approach. Teachers did not pressure her nearly as much as they did Darrell, nor did they limit or close her activity segments. She knew how to get teachers into a conversation and she was able to get hugs and affection from them. She also sometimes wore them out with her pushiness and eagerness to answer questions. All in all, however, it was clear that the teachers were pleased with her intelligence and delighted with her energy and persistence. During a discussion of the food that they were going to have for lunch, a setting in which Darrell particularly "dumbed out", Karen gave a running commentary on the discussion. She said, "I hate salad, yuk". She rubbed her tummy in delight at pictures of food that she liked. At one point when the picture showed eggs, she commented, "Chickens give us some eggs, and eggs give us some chickens." At no point did she seem to experience the existing structure as being tight and restricted, as did Darrell. Furthermore, the teachers let her get

away with much more, probably because they felt that she was really learning from what they were providing.

Children at Kirkland Christian

Kirkland Christian was selected as an open structure center. It is housed on church property in a building which was designed as a day care center. The center is affiliated with a wealthy mid-city church and serves a heterogeneous and integrated population ranging from professional families to domestic workers. The staff is well-prepared and use a somewhat gentle and soft-pedaled approach with children punctuated by occasional firm setting of limits. Students from a local junior college come for training, making the adult-child ratio about one to five. The director is particularly concerned to provide a warm and loving atmosphere which will enrich the life of the family.

Children are grouped by age and each group is kept to its own area in a rather small yard. A large grassy area in front of the church gives some relief from the small yard. Trips around the community also are included as part of the program.

Josie, A Non-Thriver

Josie was 43 months old, tall for her age, muscular and well built. She lived with her mother and father and a much older sister who was in high school. The staff said that Josie had many nieces and nephews who spent quite a bit of time in the home and that the mother reported that Josie did a great deal of fighting with them. The mother also had said that Josie got up in the middle of the night and went down into the kitchen and cooked.

Our profile of Josie showed that she was high on thrusting behavior, and low on responding and on all categories of integrative behavior. Josie did a great deal of rejecting, giving orders and calling attention to herself. She was the highest child in our sample for such behavior as calling from the top of the jungle gym, "Hey, everybody, see me!" She also did a great deal of giving opinions. She had no codings for awareness of cognitive and social constraints, and although a considerable amount of her attention was focused on other children, she had very little mutuality in social interaction.

In many ways, Josie's profile was like that of Karen at Dover with the exception that she was lacking in cognitive awareness and was exceedingly high in simple physical and tentative behaviors. Like Karen, Josie was very much involved with adults. The amount of attention which she directed to them was much higher than for any child in this center, where attention to adults tended to be lower than in closed structure

centers. She evoked about three times the amount of adult pressure ordinarily encountered by children at Kirkland Christian. Over 60% of teacher approach for her was rated as neutral or irritable, with frequent emphasis on rules and restraints. Teachers characteristically did not open activities for her. Her behavior included an exceptionally high amount of testing limits, usually involving an interpersonal hassle with teachers. Although virtually all of her time except for eating and structured transitions was spent in a free choice play structure, nearly 40% of her activities were initiated by teacher pressure.

Josie had considerably less attention directed to the environment than other children. Along with this she had no activity segments where she played alone, non-socially involved. Nevertheless, dramatic play as an activity segment was entirely absent for her and she was surprisingly low on mutuality in social interaction, considering the time she spent with other children.

The environment in which Josie interacted was characteristically a simple one. She seldom played with complex equipment and had no activities which involved a super unit. Over 70% of the tasks in which she was engaged were rated as "task presents no challenge". Josie was seldom rated as neutral in affect. She spent much time in coping with anger and often appeared distressed.

However, she managed to get her share of pleasurable involvement more often than many other children whom we observed. This type of involvement for her seemed to come primarily with rewarding physical activities. Josie could swing higher than any child we observed. She could keep herself going high while hooking her elbows around the swing. She could swing sideways and twirl herself around. In like manner, she could do more things with a tricycle than any child we ever observed. It was Josie who could ride a tricycle full speed across the yard with one hand on the handlebars and one foot on the pedals. While all of the other children in her group were carefully and painstakingly climbing the jungle gym, she was up to the top in no time at all and sliding down the pole, her long legs kicking three children in the head on the way down. This intrusion toward the other children was called to her attention, but to the observer it seemed only an inevitable outcome of the disparity of her skills compared to those of other three-year-olds. Shortly after this episode, she left the jungle gym, used one of the jumping boards as a ramp, and called to the teacher from the top of the playhouse. During the entire day in which we observed her, she was performing physical feats which were beyond any of the children in the group, and constantly seemed to throw the teachers off balance because they were so out of keeping with teacher expectations.

The other children seemed somewhat afraid of Josie. She was bigger and much stronger and not at all afraid to tell them off. During

dramatic play, several children were getting clothes out of a cabinet and Josie came and sat on it. The children howled and screamed and Josie was immediately scolded and ordered off. She seemed to delight in the ruckus that she caused and did this sort of "creating a scene" many times throughout the day. Certainly she was an exhausting child for a teacher to cope with. Teachers tended to alternate between gentle suggestions of alternatives and, when driven to distraction, firm statements of what Josie could not do. Josie seemed a little puzzled by the gentle suggestion of alternatives, but she clearly considered the firm setting of limits as an interesting challenge.

It was our feeling that Josie needed more complexity. About the only thing in the setting which seemed to offer a challenge was the social game of dealing with the teacher when the teacher was at her wit's end. There was nothing in the physical setting that challenged Josie except things which horrified the teacher, such as climbing to the top of the playhouse or climbing the poles on the swing structure. These teachers, unlike those at Dover, did not set cognitive tasks for children or state clear-cut expectations for performance. We suspect in many ways that Josie would have thrived on the firm demands for competence from the teachers at Dover, and it seems likely that, had Karen been in a setting such as Kirkland Christian, she might have looked a good deal more like Josie. It seemed to us that much of Josie's impossible behavior was a frantic demand for more complexity. She needed a number of hard things to do -- physical things, social tasks, cognitive challenges.

Josie also needed opportunities to develop some real mutuality in her relationships with other children. Clearly she viewed these small children in her group with a certain amount of contempt and might have worked much harder to build relationships had she been with children who appeared to her as closer to her size and children who could do some things better than she could. She appeared to need some mutuality in her relationships with adults as well. At snack time the teacher put things out on the table and Josie immediately began taking over and passing the cookies. This did not sit well with the teacher, but we suspected that Josie could have, in fact, run the snack time entirely by herself and that she would have delighted in the opportunity to do so.

Chris, An Average Child

Chris was a chubby, blond boy, 50 months old. He lived with his mother and father and was an only child. Typically, he appeared calm, controlled and rather slow moving. He had been in the center for about 18 months at the time we observed.

Chris, unlike Josie, was low on rejecting and thrusting except for codings in the category "is physically active". He was high on

responding, particularly in looks, watches and receives help. Like Josie he obtained no codings for awareness of cognitive and social constraints and was low on social interaction. He was also high on those codings which made up non-focused cognitive engagement.

He received much less adult input than did Josie, especially adult pressure, but teacher approach to him was friendly and teacher emphasis was on consideration and mutuality. Teachers occasionally instigated activities for him, although his total picture was of low involvement with adults. During an activity where the children were making apple sauce, Chris kept eating the apples. The teacher did not intend it for a snack time and kept reminding him, but it seemed to bother him not at all to be corrected.

Chris also had relatively little close involvement with other children. Like Josie he had no segments labeled as dramatic play. He spent considerable time watching other children with detached interest. His involvement often seemed to be a kind of controlled testing. During another activity which involved cars on a round table with sawdust, some of the children were intently playing with the cars and the sawdust. Chris spent most of his time testing the responses of other children. He would shove his car provocatively into another child's and then watch the response. He would "play nicely" for a moment, then he would test again.

An example of his ability to withdraw to solitude in a highly fluid social setting occurred at the end of the cars and sawdust activity. He began watching intermittently a somewhat chaotic block activity getting started on the rug nearby. He then spent six minutes sitting in a cardboard box and watching. After the other children had settled down and Chris had had a nice rest, he got out of the box and became active again.

He was often actively involved with the environment. Twenty-one percent of his activities were alone, about one-half with complex equipment and occasionally with a super-unit. He sought out and made good use of the objects in this setting. Because he did not usually seem to be tremendously involved in activities, no one who observed him would have guessed that he could get as involved and excited as he did the day before Thanksgiving when a teacher took a group of children into the church refectory. He had the time of his life playing hide-and-seek in the stage curtains, inspecting the microphone, making believe the fire extinguisher was a telephone, getting up and down, on and off the stage. This particular setting with its adult props seemed to stir his imagination as no one had seen it in the nursery setting. All the adult-sized props -- stage curtains, mike, table decorations -- suggested new and unusual games for him. In this setting he really established contact with other children in a free-wheeling, run-around-the-room way which we had not seen before. In the church kitchen

where the teacher had taken a few of the children to put something into the freezer, Chris was fascinated with the activity, especially the steam coming out of the pots on the stove. He stood watching, transfixed.

It is often difficult to provide sufficient variety for a child who has been in group day care for a long time. Chris seemed to have exhausted the superficial possibilities in the setting and was coping well with its limits in complexity.

Diana, A Thriver

Diana was 38 months old. She lived with her father and mother and a seven year old brother. She was very small for her age, beautifully coordinated, rather thoughtful and deliberate in her movements, relatively quiet and easy-going.

Diana had an exceedingly well-balanced day with about equal amounts of thrusting and responding. Virtually every behavior found a fair representation in her profile with one exception, awareness of cognitive constraints. The low count in this particular category was found for every child in this center and leads us to believe that this was primarily a characteristic of the center, not of the children. Diana spent considerable time in dramatic play with other children. She was capable of sustaining long periods of play, sometimes with a group, often with one other child.

Diana evoked a great deal of responsive and helpful behavior from adults. Almost all of the adult input which she received was facilitative. Partly this was due to her ability to evoke positive responses from adults, partly it was due to the use which she was able to make of available settings. For example, if the teacher put out basins of water and dolls to be given a bath, Josie characteristically would avoid or sabotage the activity; Diana invariably approached immediately, listened to the teacher's suggestions about what they might do and how they might get started. Once involved, she characteristically worked systematically, using every possibility which presented itself. For example, during a sequence of washing the doll, she carefully and methodically soaped the wash cloth, started at the top, carefully washed the doll's hair, cleaned ears, nose, slowly worked her way down until she put the finishing touches on the toe-nails of the doll. This particular mode of approach characterized almost every activity which she undertook.

Undoubtedly she was a very rewarding child to have in the group. Her high awareness of social constraints was reflected in her clear sense of what needed to be done, and she was able to do it skillfully in ways which would bring her praise. For example, she and another

child in the sample, a non-thriver, were sitting at a table for snack time. When the carton of milk was put out, Diana reached out and very deftly opened the carton and got the pouring spout ready, turned it at an appropriate angle so the teacher could pick it up, and smiled. The teacher responded with warm praise and a thank you. One of our non-thrivers, sitting across the table, started to move about the same time as did Diana. His intent, clearly, was to pass the cups around. However, he over-reached and knocked some down and immediately was scolded by the teacher. Diana had all of the satisfaction of touching and feeling and being active with the end result of praise. Our non-thriver, with a similar intent, ended up with a scolding.

Diana was not as physically skillful as Josie, nor did she have nearly as much interest in large muscle activities. Her excellent small-muscle coordination was a great asset in adults' eyes, whereas Josie's superb large-muscle coordination was a threat in an environment scaled for three-year-olds. Further, Diana's small size was an advantage. Not only was she physically appealing to adults, but if she had climbed to the top of the jungle gym and slid down, her legs were so short that she could not possibly have kicked other children.

Children who are out of scale with their physical-social environment, like those who are clumsy in large or small muscle coordination, are likely to disturb any environment carefully planned by adults. The frustrated adult typically reacts by frustrating the child. The two non-thrivers, Josie and Darrell, both fit this description. In addition, neither had developed skills of social interaction with other children, which would give teachers the satisfaction of seeing them playing happily in a group.

Children at Emerald

Emerald, selected as an example of a closed structure center, is owned by a married couple. It serves ninety children for both half day nursery school and day care. The physical plant is attractive and clean. The inside areas are comfortable and well-equipped. The outside yard has been carefully planned for safety; there are no swings, jungle gyms, or jumping boards. The teachers handle twelve or more children with great aplomb. Children are taught social and school-task expectations. Many opportunities are given to perform before the group.

John, A Non-Thriver

John was barely 24 months old when he was enrolled at Emerald. At the time we observed him he had been there for three months. He lived with his father and mother, an older brother and two older sisters.

John had somewhat more than average amount of rejecting behavior. He was very low on all types of thrusting behavior except for selecting,

choosing and being physically active. Giving orders, stating opinions, and asking for help were virtually absent. He was exceedingly high on responding behavior; twenty-six percent of his time was spent looking and watching. Mutuality in social interaction was totally missing and the amount of attention directed to other children (11%) was one of the lowest in the sample. He had large amounts of tentative behavior and not attending to external stimuli. Because he was so slow in getting through the routines, John spent nearly 30% of his time in structured transitions. He received twice as much pressure as he did facilitation. He spent nearly 30% of his time alone, a figure which is exceptionally high for a child in group care.

John really did not yet use language effectively. In contacting other children he still used a poke-baby style accompanied by a sound (no words). This type of approach netted him a great deal of justifiable rejection. He was so inept at his social relations that it was almost necessary to provide a certain amount of isolation. During one of the activity periods, he was seated at a small table, abutting the large table used by all other children. He simply could not maintain himself in close quarters with the whole group at one table. However, this isolation rather effectively labeled him as a deviant and it not only made him a physical isolate but also prevented him from seeing much of the getting ready for lunch and the getting ready for afternap activity which was occurring behind his back.

He received mostly friendly or neutral teacher approach. His teacher was slow and easy going and made her instructions simple and exceedingly clear. Of all the teachers we observed, this one probably did a better job in managing such a large group of very young children than many teachers who had less than half the number.

John seemed to be a good example of a child who was not ready for a group program, especially one in which there was only one adult for 12 or sometimes more children. Most day care which now exists is based on certain assumptions: that children can use language effectively, that they have some minimal skills in contacting other children, that they can profit from a group experience. John seemed to provide a good example of what happens to children who do not fit these basic assumptions. John apparently needed much more individualized attention and the close companionship of an adult who could keep demonstrating to him, slowly and consistently, the uses of language.

Marcia, An Average Child

Marcia was 48 months old, tall for her age and attractive. She lived with her mother and father and was an only child. She had been at Emerald for eighteen months and before that she attended another day care center in the neighborhood.

An outstanding characteristic of Marcia was the use which she made of the setting for social purposes. Twenty-six percent of her mode coding fell in the categories of social interaction. The amount of attention which she directed to children was approximately twice as high as the average for the sample. She accomplished this feat, in a setting which did not deliberately promote social interaction, by making use of all free time for social ends. During the outdoor "recess" periods, which provided the primary opportunity in this center for spontaneous interaction, she instantly got the play going and played until the last moment. This center was high on structured transitions so that Marcia, like all the children, spent much of her time in between play activities, waiting, lining up, washing, etc. She made very active use of these times, using them for visiting, social giggling and occasional social games. The staff were very accepting of this kind of involvement and did not try to stop it.

Marcia's ratings for pleasure and involvement were high. She received relatively little attention from adults and was low on amount of attention directed to adults. The adults in this setting appeared to achieve their leverage by creating a clear structure in which there were constraints which Marcia recognized and made use of. She was quite high on recognition of cognitive and social constraints. In addition the structure permitted her free rein for social interaction during certain clearly designated times.

Observers thought Marcia was exceedingly competent and were surprised to learn that she had not been nominated as a thriver. Perhaps she missed this rating because she did not solicit much teacher attention and did not outdo herself in teacher directed group activities.

Lynn, A Thriver

Lynn was 30 months old, an only child who lived with her mother. Lynn was small for her age, blonde, rosy-cheeked, almost a stereotype of the common image of an adorable child.

Lynn had a large amount of rejecting behavior, and more thrusting than responding. Unlike John, she was exceedingly high in asking for help and in giving opinions. It was no problem at all for her to say exactly what she wanted and what she didn't want. Over 10% of her responding behavior was receiving help. She was also high on integrative behavior, most of it social interaction, but also including a considerable amount of awareness of cognitive constraints. Much of her social interaction occurred in dramatic play.

In a setting with twelve other children, most under three years of age, she managed to get as much facilitation as children in open settings which had twice the number of adults to children. Almost all

teacher approach was rated as sensitive and friendly, none as irritable. For Lynn, teacher emphasis was primarily on consideration and mutuality. The teacher never tried to close activities for Lynn.

We might have rated this setting as not having laps available were it not for Lynn. Lynn not only managed to get herself a lap when she wanted it, but she also got a teacher, in the late afternoon, to pick her up and stand there holding her lovingly. Observers found it relatively easy to discourage children from interacting with them in group settings. It was Lynn who came closer than any other child in engaging the observer's attention long enough to make it an activity segment.

Most children in this group depended on the teacher for scheduled toileting. Lynn would stop playing and announce loudly to everyone, "I'm going to the bathroom." On her return she would again report to the group, "I'm done." When the teacher told children to line up at the door, it was Lynn who called out a bouncy and loud, "I am."

Lynn could certainly act on the environment, but she could also sit and take it all in. She had a five and half minute activity segment which was spent watching others do puzzles. After this period of intent watching, Lynn engaged herself with wooden beads. She lined them up, she pretended to eat them and when it appeared that somebody might take them away from her, she guarded them effectively.

Apparently Lynn could initiate and sustain dramatic play in almost any setting. In the late afternoon, the children from her group played in a very, very small yard with a large number of tricycles. The yard was so small and the tricycle traffic so heavy that non-participants clung to the fringes of the yard. Lynn plopped a milk crate down in the center of the trike riding circle, climbed inside of it and invited a friend to come and do the same. She then announced that they were at the beauty parlor. She secured a bucket from a corner of the yard. After pretending that she was pouring water on her head, she put it on her foot and admired her new shoes; then she put it on her head and showed the boys her new hat. She picked up a plastic handle which had come off a sand pail and pretended it was a telephone and engaged in a telephone conversation. Then she started singing and would stop each time a boy got off his tricycle and came over to "wash her hair", again legitimizing touching and feeling. Lynn could maintain her focus in a fast moving and large group setting and could create opportunities for other children to play, to touch her and even rough her up in a socially acceptable way. Such behavior made her a popular member of the group and made the setting work much better for the teacher.

Children at Maywood

Maywood is a Board of Education Children's Center serving primarily a lower class white clientele. In this center there seemed to be a number of children whose mothers were in job training. The center is housed in a new building which had been specifically designed as a day care center and is viewed with pride by the community. The building is impressively good looking with a large yard, part cement and part grass. Despite the impressiveness of the physical site, which was one of our reasons for picking this particular center over others in the district, the space does not work as well as might be expected to support the program. The teacher-child ratio is 1 to 10 except for busy times like before lunch when it is 1 to 5. Teacher style tends to be laissez faire.

Butch, A Non-Thriver

Butch was 32 months old. He lived with his mother and a younger brother. He was somewhat tall for his age, sturdy, with a shock of red hair and freckles; he looked at least three years old. He was the kind of a child one might describe as "all boy".

Butch had more than twice as much thrusting as responding. He was high on selecting and choosing, high but not nearly as high on aggressive intrusion as Jimmie, the next child to be described. Butch was the only child in the sample who had almost as large a percentage of receiving frustration and pain as of looking and watching. This happened only because his incidence of looking and watching was very low (5%) and his incidence of receiving frustration and pain was high. Indeterminate behavior and not attending to external stimuli were almost absent in Butch's record. He was extraordinarily high on the integrating categories of adds something new, tests and examines. Butch was clearly action-oriented and this was the source of much of his trouble.

He had relatively little attention directed to adults, but he received about four times more adult pressure than any other child in this center. More than one-third of the teacher input was rated as insensitive and irritable with a major emphasis on social rules, control and restraint. Butch tried to open almost every activity segment in which he was involved, and one third of the time the teachers tried to close it.

To the observers Butch appeared to be determined, exuberant, warmhearted, innovative and, above all, energetic. He had a considerable amount of mutual social interaction. Clearly he was interested in other children and this interest often led to problems. Several segments are labeled "building with blocks and making other children laugh by being silly" or "Sand play; making a mountain and acting silly to make the girls laugh and then being aggressive to other children". As one observer commented,

> The girls egg Butch on and he becomes a clown to their delight. Butch began both of these segments all right. He even tried to get rid of the girls at the sand play, but their enticements proved too much. Everyone laughs at Butch. As I watched, I wondered if he didn't have a loved father or uncle who teased and joked with him in this affectionate, boisterous way. I keep feeling that Butch's initial serious constructive involvement could be easily supported and the other children could be helped to find something to do.

This same observer commented that two of the most impressive activity segments which she saw in the study were supplied by Butch. One was labeled "Using a paper shamrock on a string and a paper streamer to play with the wind". This was an elegant exploratory learning bit. He really tested out different directions, different places, different movements, carefully watching the effects on the shamrock and the streamer. The other activity lasted for 16 minutes and was entitled "Waiting for a girl to finish a favorite puzzle so he could have it". Three times he turned down the teacher's attempt to distract him. He spent some of the time walking around the room, much of it watching the girl, but he did not bother her while she was working the puzzle.

Our observation of Butch's afternoon, as described by one observer, seems to give a good description of the kind of involvement which Butch had with other children and with teachers. The observer commented,

> Maybe I should have left his afternoon activity as one segment called "Having a bad afternoon in the older group when you're younger but staff can't leave you in your own group because there is a new afternoon teacher and she doesn't know how to cope with you."

His activites are described in sequence below.

1. He joined two boys on the jungle gym, added the slide and some healthy, instigative "meows". The boys left; Butch looked around briefly for them, then joined them on a climber. The boys made it clear they did not want Butch there and he left.

2. He returned to the jungle gym and joined a group of other children. Aggressive intrusion began to appear in his record. He was tessing, bumptious, intrusive; he looked very much as if he were trying hard to be masculine. Some children didn't know quite how to "take" him. This was not his group. Perhaps a girl withdrew, looking apprehensive.

3. Butch left the jungle gym, wandered briefly, then joined a little girl who was lying on her stomach on a swing facing the back of the yard. Butch lay on his stomach on a swing, too, facing the same way. The two children smiled and swung together, relaxed, happy for half a minute. (The observer relaxed too, happy that Butch had found a friend after several rejections.) Neither child could see the rest of the group or the teachers, and they were caught totally by surprise when a teacher pounced on Butch and gave him holy hell for breaking a rule and lying on his stomach - it's dangerous. NOTE: the little girl was not scolded, or even noticed. But she took the whole scene in and probably learned not to play with Butch; he was bad! Butch was made miserable for 3½ minutes.

4. Then he swung properly and was mightily praised by the teacher. But the real meaning of swinging had been lost to Butch since the other swing was now empty.

5. He briefly joined two boys playing at the tree,

6. then joined two girls on the climber for a minute.

7. There was two minutes of trike riding with so much gusto that he finally fell off. The teacher pounced on him and accused him of riding unsafely. She said his feet were off the pedals and as punishment forbade him to ride any more. NOTE: his feet were on the pedals; this <u>was</u> an accident. Further NOTE: no one wondered if he was OK.

8. For almost two minutes, Butch darted about looking confused,

9. then he returned to the jungle gym and joined a group of children already at play. The earlier "meow" of a kitten now became the fierce roar of a lion, but Butch's grin and twinkling eyes let you know it was all in fun. Finally a boy responded in kind and the two children began a playful interaction of jungle animals. (Butch insisted on making friends -- good for him!) The observer's time was up and she rose to leave. Turning she saw a small tattling girl being reassured by a teacher, "No monsters allowed at school. Butch will have to find something else to do!"

Butch had an energy level and a demand for involvement which simply did not fit the style of this center. He needed lots of space, he needed support in getting away from enticing girls and he needed lots of support both from adults and the environment for his experimental ideas Butch was still a very young boy, not yet three years old, and he needed adult help in finding ways in relating to his peers where he could find constructive uses for his clowning.

Jimmie, An Average Child

Jimmie was 47 months old; he lived with his mother and a younger sister, and his grandmother and grandfather. Jimmie was slender with brown hair.

Jimmie had about equal amounts of thrusting and responding. He was quite high on aggressive intrusion, but exceedingly low on both asking for and receiving help. Thirty percent of his time was spent in the category, looks and watches. This figure was much higher than for most children. (Butch had only 5%.) Jimmie was about average for social interaction and seemed eager to make social contact. He had no segments where he played alone.

Jimmie received very little attention from adults. During the entire day, he had two instances of instigation and twelve of pressure. Two-thirds of this adult attention occurred during toileting and wash-up. Only twelve percent of Jimmie's time was spent paying attention to adults and this was primarily during story time and other group activities. On the one hand, he did not get involved in negative interaction with the teachers; on the other hand, he did not get involved in positive interaction with them either. As far as he was concerned the adults in this setting were almost non-existent.

Much of Jimmie's time was spent paying attention to the environment. Often he tried to make social contact, like following another child on his trike. When this bogged down he would ride over to the fence and watch the activities in the other yard. An example of Jimmie's behavior in this setting occurred in the sand pile where Jimmie was playing with some other children and, as was often the case in this center, all the children began to gravitate to the action. Eventually there were so many children in the sand pile that Jimmie couldn't function. However, he stayed there and ended uppouring sand in another child's hair, partly because of the paucity of props and partly because with that many children in the sand pile there was not much else to do if it did not occur to you to get up and leave. The sand pouring was one example of Jimmie's rather frequent aggressive intrusion, but neither the teacher nor other children appeared to take particular notice. (Butch had considerably less aggressive intrusion, but the teacher and children often assumed it, even if it had not occurred.)

He spent a great deal of time staring wistfully into the next yard through the chain link fence. However, he could be inventive with the materials which were available. He experimented with a box which he balanced on his shoe. He played with a piece of tape which he wrapped around a tree trunk. Indoors, the best time for him was sitting on the floor of the bathroom waiting to wash up. All of the children had individual wash cloths and someone had gotten the idea of playing bandit

by putting the cloth on his face. This type of horse play with other children with a clear-cut theme in an enclosed space really seemed to satisfy Jimmie's needs for activity and companionship.

Individualized adult attention might have supported his creative involvement with materials, and provided him with social interaction that had more depth and challenge. Also more available materials would have helped. This center did not seem markedly short on materials, but the props never seemed to be made available in the places where children were playing.

Steve, A Thriver

Steve was 35 months old, slender in build, with brownish-black hair -- a younger-looking Jimmie. His appearance was rather ordinary and undistinctive; he was one of the children that observers kept track of by scrupulously noting the color of his shirt.

Steve, like Jimmie, had very low involvement with adults. He, too, was pretty much on his own except for toileting and wash-up. However, Steve was the only child we saw in the center who was able to get an adult into an activity of his choice. He went over to the teacher and asked her if she would play ball with him. She did, in fact, play ball for four minutes. During the day he received 12 instigations from the teacher. Some of these occurred during the ball playing incident. Others occurred during a puppet activity and story time. The 31 pressures occurred almost entirely during toileting. Eight of the 31 occurred during three minutes when Steve was washing up and was playing in the water while washing his hands. He was scolded for doing so and reminded as to what he was supposed to do next.

Steve, like all children in this center, was high on abortive activities -- about equal to Butch and higher than Jimmie. The frequency of abortive activities here appeared to be caused by interruption from other children and by the difficulty in getting a really good activity going, given the lack of props in areas where children congregated and shortage of adult help.

However, Steve had certain competences which served him well. He played well with other children and occasionally played alone; he could create activities which attracted other children and drew them into participation. He also managed to spend almost all of his time in physical settings rated as complex. Partly this happened because he knew how to make play more interesting. If there was nothing in the sand pile, he would scrounge a few cups and spoons and take them over to the sand pile. One morning the observer watched him in the sand pile pouring sand from one cup to another. His activity attracted the attention of other children and in a short time there were 14 children crammed into the sand pile. Unlike Jimmie, Steve left and began to ride a tricycle.

He brought props over to the trike riding area and experimented with turning trikes upside down and playing with the wheels and with taking the handlebar grips off the trike. Inside, he made good use of the puzzles and toys which were provided. Probably the characteristic which rated him as a thriver in this setting was his ability to shape the environment to his purpose and leave it for something else when his interest flagged or other children interrupted his play. Steve was not dependent on other children to provide play ideas and he was not afraid to leave the group to start a new activity. This characteristic, coupled with his capacity to produce and sustain organization through the introduction of props which added complexity, enabled him to do well in a setting characterized by low adult input.

The Effect of Each Center on Children

Each one of these centers seems to have certain characteristics which were reflected in the behavior of all of the children in the center. Dover was characterized by high adult input. The adults in this center were goal oriented, enthusiastic, energetic and capable of sustained high input with children. This approach worked exceedingly well with Karen and offered considerable enrichment for Devon. It appeared to have some disadvantages for Darrell, who needed adults who were less intrusive, more sensitive to his muted responses, and probably slower moving.

Kirkland Christian produced strikingly low cognitive involvement for children. Children were not afraid of adults in this setting, but they had trouble getting a sense of what adults were about. The center seemed to be lacking in opportunities for children to test their competence and skill. Josie clearly was asking for more work orientation and harder things to do. Chris did not come alive until he got out of the nursery school and into an adult setting with adult props. Diana was still very young and clearly able to make good use of nursery school activities. But it may be that if she stays in this setting until she is ready for kindergarten, that it will become too simple an environment for her.

Emerald almost demanded of children that they enjoy and be good at social interaction and that they know how to get adult attention when needed. Both Lynn and Marcia could do this, although Lynn was much more adept at (and interested in) getting adult attention. John clearly needed a setting where he could get himself together and get ready to interact with children. In this center the regularity of the scheduling, the large amounts of time spent in structured transitions and the high ratio of children to adults could have been deadly, but they had some unanticipated side effects. Teachers in this setting worked very hard seeing to the feeding, toileting and basic housekeeping, and they were

matter of fact and clear about how things worked. During times of waiting, they were quite willing for children to amuse themselves and tacitly supported their social inventiveness. In many ways, this setting resembled home more than did the other centers. The husband-wife team with its teachers who were solidly rooted in the neighborhood and its mores, worked hard to keep things going and thus provided comprehensible models of adults at work. They, of necessity, provided chunks of time when children were on their own and responsible for their own behavior.

Maywood produced large amounts of abortive activity in all children and seemed almost to force aggressive behavior in the absence of opportunities for other effective approaches. This was a setting which required children to be exceedingly independent of adults and to be able to function on their own. It also appeared to require of children an independence from peers. Although there were props and equipment here, a child had to find and utilize them on his own, a behavior which required a certain independence from peer pressure. The setting did not work for children who upset the group equilibrium or who wanted or needed adults to expand their world. Steve did well because he could separate himself from the group and innovate on his own. Jimmie, like many other children in this setting, took most of his cues for behavior from other children. If the adults had been more active, probably he would have been less dependent on other children. This center, like a great many others, did not offer opportunities for a child like Butch who needed free rein to explore the world and adults who could both help him and appreciate his irrespressible zest and energy.

CHAPTER 7

A LOOK AT REAL CENTERS

In the last chapter we looked at the characteristics which children brought into the day care setting and considered the specific ways in which a center responds to an individual child. In this chapter we will examine the characteristics of centers, especially those which provided the basis for structuring children's experiences.

We have proposed that a basic difference among centers could be found in the ways in which children got into and out of activities. In closed settings teachers made most of these decisions. This approach was associated with more time spent in structured transitions, more teacher-directed activities, more teacher pressure and lower amounts of abortive activity. In open settings where children made far more decisions, children spent more time in abortive activity and in free choice program structure. They experienced less teacher pressure and spent less time in structured transitions. However, these generalizations gloss over marked differences among individual centers, each of which tends to develop its own program style.

Each center settles on a particular combination of staff, equipment, spatial use and scheduling --a set of decisions which then has far reaching consequences for the program. While all closed centers provide relative clarity of structure, they differ greatly in their flexibility and leeway for individual differences. Open centers ordinarily provide more flexibility but differ greatly in the focus and depth of exploration which they promote.

Throughout the study observers tried to figure out the sources of all of the variation which they were seeing. After all of the coding sheets were turned in, the discussion began. The descriptions of centers which follow contain long excerpts from observers' informal comments. Observers worked very hard at objective coding; at the same time, everyone was encouraged to keep emotional responses and intuitive perceptions out in the open. This openness helped us to stay aware of our personal biases, to release tension, and also to suggest new focuses for systematic observation. (As one example, the softness index developed out of intuitive perceptions.) The child development background of the observers will be evident in their personal preferences for the individualization and flexibility characteristic of open centers. However, all valued the clarity of some closed programs, and recognized, to differing degrees, the hazards of too much openness. The differences among us, like the differences among centers, often helped sharpen our thinking.

The Three Most Closed Centers

Alvern, the Elementary School Model

Alvern was a long established proprietary center in a prosperous suburb. The center was housed in a new and attractive building. According to the director, the program was designed for an upwardly mobile middle class clientele. The adult-child ratio was 1:10.

Alvern offered children the lowest amount of choice of any center in the sample. For a closed center it was also low in amount of time spent in structured transitions and the lowest of all 14 centers in amount of abortive activity. An observer describes how this level of efficiency was achieved.

> Indoor play places are assigned. The most treasured places to raise your hands for are (1) the play house, (2) the floor blocks, and (3) any "creative" activities which may be available. Children who are not assigned to these places "go to the tables!" Table activities are set one to four per table, and are all closed or relatively closed. Mobility is limited; you stay at your place at the table, sitting "properly" in the chair. The activities range in age-appropriateness from one year old to age 7 or 8 and up. I saw both Lisa and James "stuck with" highly immature stuff for them. (James had baby puzzles; Lisa had hollow plastic blocks that fit into one another.) Children are pressured to use what they have in front of them. Apparently you do not combine table toys that are, on the surface, "uncombineable". Sitting next to Lisa and her stack blocks was a little girl with a set of small decorated saucers that stacked (no particular order) in a small box. These attracted Lisa. The idea of combining the toys into a tea party would not be likely to occur in this setting. The setting, in fact, does almost nothing to support social development. (The incidence of social interaction was very low.)
>
> Outside places, such as the hollow blocks and sand table, were assigned to children before they went out. The remaining children went to outdoor tables. Refrain: "Who would like to play in hollow blocks today?" Hands are raised. Teacher chooses from among these children. Rule: having chosen, you stick for the whole time!
>
> On moving from place to place: (1) You may move to an empty chair at your table when you want to. (2) To move to another table, you ask the teacher's permission. (3) You may not move out of "special places" like play house and blocks

without permission. (4) You may not leave your place (table or special) to go to the bathroom without permission first. (5) You may move from table to table, if you go to immediately adjacent table and there is an empty chair. (I think this is O.K.; it may be how you sneak, I don't know.) (6) You cross the central circle area at your peril.

Mobility was exceedingly low. The only place indoors one may stand and move "freely" is within the boundaries of the playhouse. Otherwise, one may stand and move to the next chair, or next table (with permission), to the bathroom (with permission), or in the circle (with direction).

As one observer perceived it, children who function well in this setting must be able to:

(1) Stop what you are doing immediately on teacher request and move to another area, another activity.

(2) Recognize and consistently respect unmarked or minimally marked boundaries, i.e., table surface dimensions are not marked but children rather consistently stick to non-overlapping areas, and floor blocks stay inside painted circle or within (unmarked) area close to storage.

(3) Share multi-child equipment such as blocks, much of it of limited quantity. This means devising setting-acceptable ways of avoiding conflict. Conflict leads to tattling leads to punishment. Children interrupt (break down) each other's activity (in shared blocks) much as teachers interrupt children; the response I saw was wait until it's over and rebuild.

(4) Maintain an activity within narrow boundaries, which means relating to ever narrower, finer differentiations. These children do not learn the differences between types of materials and the possible ways of combining them, but rather differentiations and relationships within a category -- the relationship between two smaller blocks and a larger block of the same set.

(5) Limit your whole body motion severely. Sit still and properly for long periods of time.

(6) Adapt to the setting requirements; there is no negotiation.

(7) Make up your mind about what you want to do rapidly. When choices are offered, "Who wants to play in..." you

have got to get your hand up quickly. When a chair is empty, you have got to move fast.

(8) Accept your own decision and make the most of it. If you choose tiny portions of food, there are no seconds. If you choose large portions of food, you must eat it all. You choose activities and materials, not friends; you must be able to "manage" who ever else is assigned to play house or floor blocks with you.

(9) Develop dual focus to a high level. If you are going to predict to any extent, to have any kind of effective choice or self-satisfaction in doing what teachers expect, you've got to attend to teacher behavior and empty-full chairs constantly. You must, however, at the same time continue manipulating your "stuff" or the teacher will come down on you. The staff does not give verbal warnings about activity change nor do they seem to attend to individual differences in involvement. I suspect the schedule works by the clock -- high and large and visible to all.

(10) In teacher directed activities which require a response, one must attend appropriately to these same fine "internal" differentiations, with minimal cues. Right-left, colors, numbers, finger play type motions, dance type motions.

"No one told you to roll over, you're just supposed to roll!" (From side to side, on your belly, not explicitly stated.)

"Shake right foot; put left hand on head; etc. Look at me." says teacher from across circle.

"Sit behind Janice. No, behind Janice! No, behind Janice!" (There were only three girls to choose from and from the back they looked very much alike.)

(11) Anticipate your own negatively defined behavior and control it.

Banning Street, A Day Care Program With a Compensatory Education Curriculum

Banning Street was housed in new quarters, a huge square building large enough to accommodate more than 200 children. The center served many children from low income non-English speaking homes. The goals of this program were educational and the program used a tightly structured format with cognitive activities. Abortive activity and structured transitions were more frequent here than at Alvern, but mobility was again highly restricted. Our view is that the size of this center required a schedule which tyrannized mightily. Children often had to stay with a sitting activity because it wasn't yet time to go outside.

Observer 1:

> Three-year-olds had an hour, I think, of sitting: first at table, then on floor, first one teacher, then another. The teachers got a break but children didn't. They had a game matching letters and pictures. George was involved, interested, responsive for a while; then he and others began getting bored, he asking to go out. (It was a difficult activity for threes; I thought they were doing very well.) Then, still sitting at table, a story (not very good choice of story) and another story. Then children were structured tightly in move from table to rug directly adjacent (wait till name is called, push chair in, sit on rug with feet together) and there was another teacher with name cards on which they were to take turns recognizing their names. "Can't we go outside?", they began to ask after five minutes of this. "No, we don't go out until ten; look at the clock." (and it was only 9:35). This had begun at nine, I think. This teacher began to read yet another story. I, too wiggly for words, left to do reliabilities. George had given up all pretense of interest and was openly yawning and squirming.

Most of the group activities in this center were cognitive games. Here again, teachers differed in their willingness to let children squirm or move around. Usually the game was beyond the understanding of some members of the group. For example, one lesson involved finding the color which the teacher pointed to. Many children appeared not to understand the word "color" and kept responding to other cues and looking at each other in confusion.

Teachers also differed in their casualness about structured transitions. During an afternoon juice time, one teacher let her younger

group help themselves to milk and fruit from a serving cart and permitted them to sit and giggle or play with their food or to get up and leave. Such times often resulted in creative play and warm social interaction. One little girl pretended that her wedge of pear was a boat and tested floating it on her milk, then it was a moon and, finally, a moustache. Other teachers struggled for a tidier and more proper transition which resulted in much teacher pressure to children and a great deal of waiting.

Cardinal Day Nursery

Cardinal Day Nursery was one of the city's old time charitable nurseries. It served many divorced mothers who worked in nearby offices as secretaries. Recently, it acquired a new building which was spacious and more elegantly appointed than the usual day care center, but its softness rating was very low. Each group had its own private room off the long hall. Each teacher appeared to function with complete autonomy both in the privacy of her room and in the large shared yard.

This center, like Banning Street, had long and frequent structured transitions. One reason they were so long here is that children spent a great deal of time moving from one place to another, classroom to music room to classroom to outdoors to classroom, etc. It was the lowest of all centers in children receiving help; however, it was one of the highest in attention directed to children and in social interaction. There was a warm intimate feeling in most of the groups, probably stemming from a real solidarity among children who spent long hours together in settings which did not offer many exciting non-social challenges.

Observer 2:

I am struck by the innocuous nature of the teachers; they're all hung up on neat and tidy and propriety, but they're so gently flustered about it all that they remind me of Aunt Polly (in Tom Sawyer) more than anything else. That is, I have the feeling that if it came right down to it they'd choose for the children rather than the proprieties. (I've seen thrivers so far, I'm sure.)

Observer 1:

Why are so many children here so bubbly and irrepressible? I really felt a lot of bounce and giggles. Is it because their tyrannical teachers threaten more than they punish, and can be discounted? None of the teachers I saw are really scary. Children ganging together could easily get the best of them, and if you do your own bouncy thing you'll get yelled at frequently, but not too seriously interfered with.

Not a good place for a scared, unhappy or tired child, I think, or one who can't innovate. There's a very little to do; it's a good example of how a restricted environment can foster in-depth exploration of materials and equipment. (How many things can you do on a small climber with seven other children? Tina is figuring them all out and enjoying it thoroughly.)

This was a good example of a center in which a child able to take initiative, especially in social interaction, could thrive within a structure which was intended to be tight but often wasn't. Alvern, in contrast, offered no rewards for initiative, only for effective recognition of social and cognitive constraints.

A Moderately Closed Center

Firestone

Firestone was a wide age range Montessori nursery and elementary school which also provided day care. The director was articulate, soft-spoken and warmly authoritative. The facilities, located in a central city area, were modest but functional and uncrowded.

This center took its structured transitions seriously as an important part of the day. They were either times of serious work, such as putting things away and preparing for juice time, or pleasant preliminaries, like waiting for school assembly, in which you get to sit with older children, to begin.

Observer 1:

What you do here is to go about the world's work. You're expected to behave yourself while doing it, and to do it reasonably efficiently, but nobody rushes you; you're trusted to be responsible, and you can tuck in a good many bits of play. It's taken for granted that 20 four-year-olds (with two adults) can walk across busy streets to the library half an hour away, and enjoy themselves on the way. Once there, they're expected to be a terribly decorous audience for a long time -- but then comes the walk back again, a new route this time.

When you get back it's close to juice time. These children behave as adults would; they sit down and talk, and if you have to go to the bathroom you take the responsibility for going and if you forget to zip your fly one of the other children will remind you. After a while the teacher assigns

jobs for getting juice ready, and there are little children carrying trays with full glasses on them, and everyone is being relaxed and responsible (though one child gives everyone two napkins and the others tattle and the teacher criticizes him; you have to do the job right). Then you drink your juice and choose a job to do.

One teacher played (worked) with some children; the other mostly monitored. There was some room for goof-off; I had the impression the teacher knew about it but deliberately ignored (e.g., two of the children peeling carrots for lunch were dueling with them for a while). Sometimes she intervened to help someone find something to do.

The rhythm of the morning felt right to me; long walk, sit still for stories (with an action break in the middle) -- too long, this, and too much decorum required, but it wasn't disastrously long like the similar story period at Banning. It was actually as long in minutes, but it was in a special place, etc., with more kinds of novelty -- then the long walk back, relax, get ready for juice time, then individual choice of cognitive games, then outdoors for active play.

Observer 3:

I liked the satisfaction children seemed to get out of putting things away; it conveyed a sense of dignity of work accomplished rather than just adult-oriented restrictive pressure. Some were urged to finish work and go outside, but always allowed to finish, even if they took a long time. They must have a good feeling resulting from this sense of closure. I also like social interaction and cognitive "work" in good balance. Although teachers place emphasis on walking properly, sitting properly, everything properly, the children could always work in some good human communication with peers without being reduced to pile of ego-rubble by teachers. The indoor equipment, although it excluded props to foster dramatic play and creative exploration, gave children something to put their hands on. It required attention and thought and gave good feedback for a job well done.

The outside yard provided an interesting contrast to the indoor area. The playground was used much like a neighborhood vacant lot. Except for swings in a large sandy area there was not much equipment. Elementary school children shared the yard with preschool children. Tire rolling was the boys' favorite activity. They were fast and skillful

and the younger boys delighted in the action. Among the boys there was bullying,bantering and jockeying for position. This was no protected nursery school. It was like playing in the neighborhood when the big boys were home from school.

The Borderline Centers

The most open closed center and the most closed open center both were church sponsored. At these centers there was a sharp drop, relative to the other closed centers, in the amount of teacher pressured initiation and termination and along with it a decrease in the number of structured transitions.

Grace Christian, Open Closed Center

Grace Christian was housed in the old church building and an adjacent building formerly used as Sunday School rooms. The former altar was now a cozy carpeted elevated platform where children could play quietly and listen to stories. This center had the highest percentage of integrative activity in the sample and was highest on mutuality in social interaction.

This center took its religion seriously and used its rituals and group activities to encourage a sense of belonging and a feeling of contribution to the group. The morning began with prayer and all eating was preceded by grace. Children visited the big church with its stained glass window for a weekly children's service. Religious commitment appeared to promote acceptance of differences among children. This center had its young Butch, who turned absolutely everything into a game. At toileting, as soon as his pants were pulled down, he was a kangaroo. (Two minutes later there were six kangaroos.) At juice time he pretended he was a fountain spurting a mouthful of juice back into his cup. Waiting for outdoor time his jacket was used for a whirling dervish game. All this was handled with good humored patience.

Observer 2:

> Group activities here often were designed to produce a group product. For example, (1) each individual has a separate part in what becomes a single large picture. (2) Each child puts glue on pre-cut felt flowers which are then glued on a big sheet of paper above a "flowerbowl drawing". Teacher then d draws the stems. Children are proud. (3) Each child makes collage with colorful bits of tissue paper. These are glued by teacher on large piece of paper to resemble stained glass window "like in church". (4) Some kind of tracing work -- rabbit and egg forms, various colors, on single large sheet of paper.

There were considerable long periods of free choice/free play. Teachers monitored, helped when asked, and occasionally introduced new things to do. There was a rich choice area: open shelves with all sorts of games, puzzles, etc. along the wall, lots of adjacent table space. Housekeeping, blocks, etc. were simultaneously available in the room. One row of tables facing the wall offered relative privacy; if a child sat at one and no one was sitting on either side, he had his back to the group and was really all alone. A child could choose any table activity he wished so long as he put it back when he was through. Thus children could be involved in a variety of activities at the same table area: hammer-nails, puzzles, and small animals simultaneously, for example.

Observer 1:

I saw Grace Christian working very well for both Dean and Roger. Dean is thing-,not people-, oriented, and was really absorbed in solitary play in the housekeeping corner and was able to be there all by himself, even with 29 children in the group. During this period I believe one teacher was doing an art activity in the adjactent room; the other teacher kept steering a few children at a time in that direction, if they wanted to go. The teacher brought a box of dolls over (I don't know if she had Dean in mind or was just putting them away there) and moving dolls became his new focus; he asked the teacher if he could and she said, "Sure". Then he went over to the table area, asked teacher to help in getting hammer-nails down, which she did promptly, and sat where other children were doing several different things and became absorbed in hammer-nails.

The teacher promoted pre-juice clean-up and then there was a long sitting-and-waiting period which she had them use to rest heads on arms (pretty dull, this could have been a nice sharing or song or story time instead of using her energies to talk about how to sit quietly).

Juice itself was perfunctory, not sociable. There was some cognitive input: counting the children in the group (29!) and grace. Only one teacher was present, except for another who brought in juice but provided no interaction. Dean coped by investigating whatever was present --toys not yet put away; then sat quietly watching. He and another boy wrapped their juice glasses in napkins (after considerable napkin play by Dean), and took them to the teacher as a present, which she rejected and told them to put away properly.

Outdoors, there was some lively play on the swing -- pumping, imitating each other, jumping off. The teacher was a bit concerned about the jumping off, told them to be careful no one was in the way, but didn't stop it, which most day care teachers would and thereby would have ruined the play, which was very much a four-year-old testing of skill, comparing courage, etc. Either of them could have gotten hurt, but not much. In most day care no one is willing to risk any hurts, even the minor unimportant kind without which you can't do anything interesting.

Highland Christian, A Closed Open Center

The buildings at this center were new and unusually nice: modern California school-type architecture, with rooms opening off a covered walkway, and attractive yards with trees, sand and grass. It was hard to locate classrooms, because they were so anonymous from the outside, but the director was helpful. The teachers were younger than average in church nurseries, though perhaps a little older than many in Children's Centers, and professionally competent.

This center had less religious emphasis than Grace Christian and less emphasis on the rewards of group membership. Children more often initiated their own activities, and time in structured transitions decreased still further.

Observer 1:

The scheduling is smooth; groups take turns with the outdoor space, and are expected to line up to move in and out and to lunch, but teachers plug in activities -- songs, games -- to make transition periods interesting, and use lining-up only for management, not as a moral lesson. (Once you get to where you're going you can disperse; you don't have to wait for permission. And lines are not close-order drill in which "we're all waiting for Robert".) Teachers back each other up especially at these times, suddenly moving in to provide an extra adult to smooth transitions (and what the extra adult is most likely to be doing is leading informal singing).

There is grace at snack and lunch; teachers carefully call each other Mr. and Mrs.; children keep their hands in their laps before lunch and are reminded to cover their mouths when they cough, but it's all low pressure.

In general, children aren't pressured to participate in teacher directed activities. A finger-play and games activity

was begun by the teacher and children joined spontaneously; when Betsy chose to leave part way through and go sit watching, then quietly investigating something else, no one bothered her. At least some, and maybe most, teacher directed activities are, in fact, part of a free-choice pattern, with doing what the teacher is doing as one of the choices.

When I arrived, Mrs. Paulson was scrambling eggs with 10 children, being neutral rather than really friendly, because this is a difficult activity to run (later I coded her as friendly and, outdoors, sensitive), but basically unruffled and helpful. She set more limits than some of the children were happy with (you got a turn either to break an egg or to beat the eggs, but not both), but this was probably inevitable with this adult-child ratio. Cooking the eggs was followed by eating them, and here there was enough of everything for everybody -- eggs, juice, and dry cereal for children who still wanted more. I nearly coded cooking and snack as one long activity segment, then decided to separate them but really couldn't say how the snack was initiated; it was just the obvious next step.

Outdoors was a long smooth free play time. While I was watching there were nearly twenty children partly with one teacher, partly with two. Again the teachers were going about their business (Mrs. Paulson had a clip board with some sort of chart) but were accessible to children who wanted or needed them. Jerry kept involving them in his selling doughnuts game; they responded warmly and playfully, but also like adults with other things to do, and the whole thing had a nice quality. Play was fluid; there were plenty of tricycles, plenty of sand. (Mrs. Paulson spent a good deal of her time with a broom sweeping off the walk. The unwalled sand areas are very attractive, but a nuisance, I suspect.)

Children were bawled out for turning on the faucet but otherwise were quite free. A group that climbed up to look over the wall at a man working outside were allowed to, although after a while told to get down and stop yelling at him. Children seemed to have no problem finding things to do; I imagine just the great quantity of sand in this yard, in several areas, helps make it interesting.

Beautiful, beautiful romp in the meadow adjacent with the young man teacher. He promoted some races, but mostly the children just romped in the tall grass; he pointed out a butterfly to them, which they stalked, and on the way back called them all to come smell a flower on a bush.

Mrs. Paulson's room isn't particularly set up to promote free choice. There's a big open space with a rug in the middle, small not very secluded block and housekeeping areas, books along the wall, puzzles on a shelf not too far from a table over on one side. In the time between snack and outdoors, this space promoted a certain amount of running, tossing a frisbee; but the teacher wasn't bothered and in fact most of the children did settle down into a self-selected activity: dress-up, puzzles, etc. The teacher, having worked hard on the eggs, simply went about her own business at this time, having told the children they had fifteen minutes before they went out; she reminded some to go to the bathroom, but mostly I'm not sure what she was going (picking up spilled egg partly) other than not bothering children.

I imagine that this whole program works to provide adequate relaxation-stimulation for teachers. They have periods of intensive involvement but they're competent enough to enjoy them, and then have times both indoors and out when they don't have to keep their thumb on children every minute, consequently they can be nice to them if asked. (In contrast, at Irvine, I saw two young teachers working hard at a music time, then ignoring children outdoors.)

I liked Betsy in this setting. She's a child who perhaps shouldn't be in day care: very intense, gets absorbed in whatever's happening, asks for a good deal of adult attention and likes to help, is quite able to ignore what's going on with other children near her and concentrate on her own investigation of things. In a group she tends to get into trouble because waiting and watching is hard for her; she wants to be actively doing, and so she alternately pushes for a turn or trots off to do something on her own. If she's overindulged at home, then maybe this setting is a good chance to have her feel less important. But if she isn't, then I don't think she should be in group care, because what she'll gradually learn is not to care so much. (In a rigid program she'd be destroyed; in this one teachers do respond to her feelings even while having to deny her wishes.)

This center clearly tried to provide a homey atmosphere. Adults taught manners and encouraged courtesy, but they also kept things flexible. This center had all of the components of the softness rating.

Irvine

Irvine was a Board of Education Children's Center which had a comfortable, roomy building and an unusually large, spacious outdoor

yard with grass, trees, large sand piles, and plenty of climbing equipment. Indoors and out, it was unusually well equipped. It had a teacher-child ratio of 1:7. Despite the fact that it served a predominantly black clientele, all of its staff, except for one teacher, were white. This was the center where a child who had made friends with the observer and gotten a chance to hear the fifteen-second beeper came up to her later and told her very sadly, "All my teachers are white."

Irvine provided all the props and procedures viewed as desirable in most open structure settings. The teachers made the appropriate mathematical statements about the orange segments at the table; they provided telephone circuits in the yard so that children could talk to each other on the telephone. There were balls and jumping boards and a good variety of equipment.

What appeared to be lacking in this center was any real warmth on the part of the teachers, or any indications that they really had a feeling for the children they were serving. In this center, each teacher was responsible for her own group in a yard used by everyone. It appeared that there was an understanding that no teacher did anything to another teacher's child, so that there were two groups in close proximity with an invisible line separating their contacts. This same theme was apparent in other settings. The observer, sitting at a distance, during lunch hour watched the teacher studiously ignore a college student who was sitting at the table as a visitor eating lunch with the group. The children followed the teacher's cue and everyone acted as if the student were invisible, even though she was sitting right in the middle of their lunch-time group.

One observer commented, "There seemed to be a great deal of emphasis on independence and a 'you do it yourself' said in a distant tone of voice." Another observer commented,

> Why is Sesame Street so much fun when our family watches it at home, and so "educational" in this setting? Is it because at home you can jump on the bed when mother is not looking, or turn somersaults on the rug and fool around if the program gets dull, whereas here, once you have come into the room, you have to sit still with your legs folded until the program is over?

This center seemed lacking in staff solidarity. Staff relationships were in sharp contrast to those at Juniper, a program with similar philosophy and goals.

Juniper

Juniper was a proprietary center run by a professionally trained director with help from her family. The adult-child ratio was 1:10. The space was limited though well-arranged, so that children were pulled into exceedingly close contact with each other. Structured transitions were low here because children did not move from one place to another in groups. Toileting and wash-up time were individual. There were relatively few large group activities. Instead, each day a teacher worked very closely with four or five children at one time who were brought indoors especially for this purpose.

Juniper was as high as the Montessori center on "doing work". Each child cleared his place at the table and wiped it clean. They also got to wash windows and had housecleaning days when all the dramatic play areas got straightened, doll clothes washed, etc.

Observer 2:

It was raining; the indoor space, intended to take one group each, held two groups each plus teachers plus our observers! We were observing Mary and Greg. Bunches of people were arriving through 9:30 at least, and the set up was that the entry opened to Mary's group space which had a door to Greg's group space. I have some 85 minutes on Mary. The first 24 minutes she was working puzzles under the damndest set of conditions (the record is very low on "attends with concentration"). I would characterize her as both persistent and alert-distractable. She kept her puzzle activity going and still watched comings and goings, interacted verbally with nearby children, interacted with teacher making dough. When she was through making puzzles she would have some dough; she obviously trusted the staff and was capable of postponing dough so she could finish the puzzles. Her last puzzle was too hard for her and the dough teacher called her over and helped her finish and offered praise. Mary apparently had "plans in mind" for her dough play in the doll area. She rummaged the shelves, found some "milk bottles in a carrier" and proceeded to put the dough in.

The director had managed to hire and keep a warm, well-trained, racially mixed staff who clearly enjoyed each other and worked well together. The behavior of these teachers was in marked contrast to that at Irvine or in textbook descriptions of good teachers.

Observer 2:

Personal experience in cooperative nursery school taught me to attend only to the children. Adults should not interact,

unless briefly about and for the children. WOW! Juniper staff not only negotiates, but chats about self-oriented stuff like "boyfriends", etc. Like mothers, who certainly don't attend only to children. They couldn't and survive.

I have an activity segment on Jill titled "waiting for collage to begin and listening to adult talk". The next segment is "collage and eating (collage materials included raisens and 'red hots') and listening to adult talk". This adult talk was not just about the center and what children were going to do. It was genuine adult conversation out in the open for everyone to hear.

The Two Most Open Centers

Live Oak and Normandie

Live Oak was a non-profit center consisting of four glass-walled modern buildings on spacious grounds. The rooms opened out onto large open grassy areas. It served an educated, upper-middle class population. Normandie was a Children's Center which served many one-parent families on limited incomes. The building was plain, but roomy. The outside yard was reasonably large but not spacious.

In overall structure, these centers were very similar. Both allowed children the choice in initiating and terminating activities for slightly more than 50% of the time. Normandie evoked twice as much recognition of cognitive and social constraints and used more closed type equipment. Adult facilitation was higher; adult pressure, though well below the average for the sample, was twice as high as that for Live Oak. These centers were so similar and yet so different, it was inevitable that observers would compare them.

Observer 1:

Obviously the day I observed at Live Oak is the day everything came together. These were the longest richest activity segments I've seen anywhere. I saw no truly cooperative play, rather, individuals exploring the world (including things, ideas and other people), frequently doing so together but not (on this occasion) with any elaborated dramatization or shared work. I'd bet there is some such play in this school, but since the setting doesn't demand it it wouldn't happen too consistently among children this young.

I will argue that Live Oak is the ideal center <u>for its clientele</u>, which is educated, upper-middle class, and relatively urban

in life style, with a large proportion of expressive-professionals (arts, communications, teaching). Children who come from small, intense families, live in apartments, and get lots of cognitive-expressive stimulation at home need, like all children in day care, both continuity (home-school) and balance (compensation for lacks in home environment). Live Oak offers continuity through shared values, expressive richness, and equalitarian, rationally explained relationships between teachers and children. It offers balance through its spatial expanse and opportunity for emotional privacy. (Children are far freer from adult supervision here than anywhere else. I watched a group of 6 to 10 children in active parallel-cooperative outdoor play with no teacher present for half an hour.)

Normandie, in contrast, offers an ideal program for disadvantaged and single-parent children. It provides intensive adult attention, permissiveness for expression of emotion, excellent physical care (with attention to the little things like shoelaces), cognitive input in functional settings (conversation at juice time), opportunities for privacy. Incidentally I saw no truly cooperative play here either; the important interactions were between children and adults. (To my thinking this is developmentally appropriate for three-year-olds and some fours -- relative lack of such play, that is.) The real play of this sort I saw was at Cardinal Day Nursery, Dover, Juniper and Emerald.

Observer 3:

(Live Oak) Not all visitors expect to be greeted by a bright and cheery "Hi, fucker!", as I was when I first walked into the yard! I apprehend this school intellectually first, then emotionally; the other way around at Normandie. How great to have so many young teachers and so many males. These people have incredible patience; really follow through on limits when they set them. ("i can't let you run into me" to David on trike, who tried for five minutes to run teacher down. Teacher, with gentle, unswerving perseverance, won!) Incredible physical setting with so much space, possibilities, etc. My only question: is this too much freedom, too open-ended, schedule-wise and space-wise, for children like David to handle? When the activity was undefined by person, place or thing, he immediately began to test limits, engage in bravado, act like a miniature, slightly mad (insane, but laughing!) Napoleon or a male Red Queen yelling "Off with his head!" And do the buildings provide as many private places as more conventional centers? (Perhaps so, dunno; I just had an illusion of being

vulnerable from many sides. Nothing to fear here, certainly, except falling off edge of earth into? Is this my own paranoia?)

No surrogate mothers here as compared to Normandie, but these children probably don't need it. I never saw a teacher here fail to give support when needed. It's just that warmth is expressed in a different way at Live Oak than at Normandie. I have one beautiful picture in my mind of a student at Normandie sitting with a child snuggled in her lap in a rocker before lunch, and I loved that cosy little reading room-office-hideaway.

Observer 2:

(Live Oak) Amorphous - feelings and sensitivities high. First, what's good. All those MEN! And freedom to move -- indoors, outdoors; fast -- across big spaces. Why do I see, in my mind's eye, children chasing and tumbling and laughing, and then lying on their backs watching leaf-sky patterns, or lying on their tummies investigating grass-earth creatures? Is that what's missing - the leisurely relaxing that goes with running hard? How good both these things feel, each because of the other!

I'm anxious to code the space, and think through what does it mean to have a shared yard and indoor and outdoor available at the same time. I don't think I've ever coded so much variable social structure, and variable teacher-child ratios before! Nothing, but nothing,has stable boundaries!

Normandie invites active exploration of an extremely interesting world. Live Oak invites running outdoors and conflict indoors. Is Live Oak primarily an expressive setting? Do children primarily experience and express feelings, with lesser support to (analytic-synthetic) cognitive development per se, over a wide range of areas? Do they have fewer alternatives available for channeling (structuring) feelings? (Over and over, far more than in any other setting so far, I have coded teachers as dealing with emotion.)

Observer 4:

At Live Oak, the entire time I was coding I felt there was no basis for evaluating child's effectiveness -- as compared to what? How can you tell if you're competent in this setting? You don't get any stable feedback.

This discussion led to a consideration of differences in the spatial characteristics. Live Oak had more space but less to do, and what was

available was stored rather haphazardly. Normandie had large amounts of equipment, a great deal of variety, and carefully arranged storage, both indoors and out.

Observer 3:

Normandie had not only open storage of lots of different things, but room to store 'clearly' in a distinct-from-one-another fashion. There was a neat stack of colored paper, empty shelf space, a neat stack of oblong (skinny) white paper, a space, a basket of crayons, a space, a basket of paint sticks, a space, a basket of scissors, a space, a can of dough tools, a space, a can of dough, a space, etc. There was room on block shelves to store each kind of block easily separated and distinctly. An adjacent space for clear storage of trucks, figures, etc.

Normandie is composed of sets of sets of sets of stuff all with clear boundaries. It seems to me that Normandie has not only the greatest number of clear boundaries, but also the greatest amount of "bridge building" or connecting-across-boundaries potential. It invites you not only to "see differences" but to reorganize, build, construct "new" differences. And there is space and time to answer the invitation of the setting.

Yards are fenced, with open gates and teachers who, more often than not, support children's requests to play in the yard of their individual choice. Schedules (time-place group assignments) exist, but rigid group movement, does not. Children move in this framework with a sense of their own will and choice.

Observer 1:

Probably what I care most about developing in children is the ability to self-select and concentrate in the midst of non-structure, plus the ability to maintain a lively peripheral attention. Jennifer at Live Oak is a good example of this kind of competence. She's very socially alert, monitors high and demands attention from adults; <u>simultaneously</u>, she was very involved with the dough, doing all sorts of imaginative things with it. It doesn't look like in-depth exploration of dough as a medium because she's got so many things going at once and adult observers tend to want concentration to look like concentration. This is another example of the kind of speed of activity I've observed at other open centers; children give the surface

impression of not concentrating on things, but in fact they're just doing several things at once, which competent children are perfectly capable of doing. As a further example of speed, Peter at Live Oak was breathtaking -- a whirlwind of energy outdoors (and the sort of child who would be a problem in most day care). But he wasn't flitting; he was intensively involved; it's just that his normal rate of speed requires going round and round and up and down.

Live Oak lacks a wide age range, and I found myself wishing for that as I observed there; the setting would be so great for older children. Open space, freedom from supervision, rather high (compared to Normandie) ratio of children to adults, limited physical care and high permissiveness for messing. Reading Observer 2's notes, I find myself not sharing at all her wish for boundaries. The lack of boundaries is what I like most about Live Oak; it's frontier to be explored, and such a lovely setting beckoning one onward.

Summary: Program Goals and How They Were Met

There were differences among centers in the clarity of their goals and the effectiveness of their structure in reaching program goals. At the risk of oversimplification, we present some capsule summaries of our overall impression of each center.

Alvern wanted to shape children up for a hard, competitive world. Given this goal, it provided an effective structure for moral training with practice in recognizing the appropriate orienting cues.

Banning Street wanted to teach cognitive skills. We felt it could do this more effectively if the schedule were more flexible and children were given more opportunities to manipulate materials. As it was organized, the teachers lost the attention of too many children.

Firestone valued the responsible, independent worker and provided an effective structure for eliciting this behavior.

Juniper also valued work, but pursued it less diligently. It was less concerned with independence and more concerned with providing emotional support.

Normandie and Live Oak valued play, emotional expressiveness, and the development of individuality.

Normandie, Live Oak, Juniper, and Highland Christian, in that order, provided the clearest home/family surrogates, although the latter two were more clearly like school than home.

Grace Christian and, to a lesser degree, Highland Christian provided a religious framework with shared rituals and adult models who tried to provide a responsible, loving community.

Irvine and Cardinal were much less effective in communicating their goals. Decisions and interactions did not clarify an underlying value system but seemed to stem from uncertainty or expediency.

Centers with clear goals have staffs which work effectively together and make good use of their space. Where space or its use doesn't support goals (Cardinal, Banning) or where mutual staff support hasn't been developed (Irvine, Cardinal) the program suffers.

Most of these centers were reasonable environments in the sense that 1) adults impose constraints and 2) children have a good chance of understanding and coming to terms with them. Alvern, Banning and Cardinal were less reasonable because they had far more constraints than children this young can be expected to understand. Live Oak and perhaps Normandie offered fewer constraints than might be reasonably imposed in most adult-child environments, and, therefore, are perhaps more child centered than most families.

CHAPTER 8

WHO THRIVES IN GROUP DAY CARE?

Throughout this monograph we have examined characteristics of children and the characteristics of the centers in which they were enrolled. The assumption implicit in this analysis has been that the fit between the behavioral style of some children and the center's structure is better than the fit for other children. The children who "fit" are those most likely to thrive in day care. In this chapter our intent is to examine more closely the question of fit and to relate it to the evaluation of quality in day care.

Characteristics of Children

Our primary concern in examining characteristics of children was to identify those which might predict goodadaptation to a day care setting. Teachers in their card sort of children's characteristics provided a clear statement of the characteristics which they saw as important to good adjustment. According to the teacher card sort (Factor III:1) children who do well in group day care:

Obey easily
Are cooperative
Stay at activities until they are completed
Play well with other children
Like quiet activities
Are usually cheerful, happy
Adapt easily to new situations
Draw other people to themselves

Children who do not adapt easily to group care:

Get into trouble with other children
Often act without thinking
Are often emotional
Do not stay interested in one activity for long
Are often grumpy
Like vigorous active play
Often appear clumsy
Find it difficult to shift from one activity to another

In gereral, then, we do not predict a good adjustment to group care for children who fit these latter descriptions. Our data indicate that children under 3 are less likely to adapt than older children, and boys somewhat less likely to adapt than girls.

Younger children were lower on all indicators of social interaction than older children. The lack of social skills is a predictor of less satisfactory adaptation to group care. Boys more often engaged in aggressive intrusion and activities characterized by high mobility. Both characteristics again are predictive of less satisfactory adaptation.

The reluctance of many centers to accept very young children is thus based on sound judgment. Many of the same children, a year later, will have outgrown the short attention span, clumsiness and emotional ups and downs which would have caused problems in a day care center. In contrast, many boys (and some girls) retain a highly mobile approach to the environment which often results in failure to thrive in elementary school as well as in day care. Some centers are organized for more vigorous activity than others; thus center structure is an important predictor of fit for very active children.

Thrive rating provided the clearest picture of the impact of children's behavior on the day care setting. In our behavioral observations, thrivers showed more awareness of cognitive and social constraints and more often gave structure or saw patterns in their activities. Non-thrivers received more pain and frustration and had more non-focused engagement, as indicated by tentative behaviors, not attending to external stimuli, and being physically active. Non-thrivers also received the most adult pressure, average children the least.

Activity segment descriptors emphasized pleasurable affect and high involvement for thrivers, facilitated by warm and sensitive teacher approach. Non-thrivers spent more time coping with negative emotions, were less often highly involved, experienced less pleasurable involvement with teachers and less rewarding involvement with children.

Thrive rating alone does not provide an adequate picture of the variety found among children who were thus categorized. The differences found by thrive rating describe only the consistencies within each group. Non-thrivers, in particular, were a diverse group. The factor analyses elucidate some of these differences, and the profiles give a taste of the subtleties which are involved in a particular child's functioning.

The following description of children according to thrive rating is based on all the data which have been presented.

Thrivers

Children who are nominated as thrivers make a definite impression on adults. These are children that adults can appreciate. They make adults feel competent, confident and on top of things. Thrivers do not create problems in a setting; they solve them.

Looking at more objective criteria, thrivers have certain characteristics which are very useful to group life. (1) They get along well with other children. They can keep the social interaction going. They add play ideas. They shape the play so it is rewarding for everyone. They can also attend to their own concerns and withdraw from other children when it serves their purposes. (2) They enjoy the activities which the teacher offers. When the teacher puts out dough, it is the thriver who walks in, looks at the table which is set up and says, "Oh, boy! We've got play dough." (3) Thrivers can negotiate and make demands on adults and children. An outstanding characteristic of all of our thrivers was their confidence in dealing with adults and other children. Meredith was not at all intimidated by the decisive, active teachers at Dover. Michael could get the teacher to play ball with him in a setting where teachers were singularly uninvolved with children. Lynn could get the teacher to give her vast amounts of attention in a setting with 12 young children and one adult. Debra could do what she wanted and simultaneously be viewed by teachers as being useful and helpful. These children clearly had found a good fit between their characteristics, adults' capacity to function, and the limits of the setting.

It may be significant that all of these children were rather small for their age. They all had excellent small muscle coordination. They had stamina and energy, but no great need to express it in large muscle activity. All of these characteristics made their style particularly appropriate to the sorts of activities and opportunities which are possible in a day care setting.

Average Children

Children who are labeled as average do not have noticeable impact on the setting. They tend to adapt to the setting as provided and are clearly children who do not attract or require attention from teachers one way or the other. Our data indicated that children nominated as average do get less adult attention but that they have a high count of behaviors which are social in nature. (1) These children can get along with other children. (2) They do not require or demand much attention from adults. (3) Unlike thrivers, they do not necessarily negotiate or make demands on adults or children.

Average children in this study could be of several types. The most common was the child who played very well with other children but did not often take the initiative. He was the good follower, who would immediately fall in with the play ideas suggested by thrivers. Observers felt that many of these children needed more opportunities to make their own choices instead of following the lead of more dominant children.

A second type of average child has been illustrated by Devon and Chris. Chris could get along well with other children and adapt well to the daily schedule, but he appeared to have talents and potentials which were not appreciated by the teacher or actively supported by the setting. Since such a child did not create problems, he did not receive negative adult input. On the other hand, he was least apt to receive positive individualized adult facilitation. Our greatest concern for these children was that their talents might not receive adequate recognition.

Another characteristic of many average children was a certain reticence and shyness. They did not push their way to the front of the line nor demand a turn. They often stood on the fringes watching. In settings which did not allow plenty of time for everyone to explore to their heart's content, we often saw these children being stopped from exploration before they got started. Ordinarily, children described as average (rather than as non-thrivers) accepted interruption with good grace. However, observers were concerned that they had been short-changed on what was offered.

Non-Thrivers

Non-thrivers also make a definite impression on adults. These were the children whose behavior brought uncertainty, conflict and confusion into the group. Adults found them hard to live with and hard to appreciate. They often made teachers feel inadequate. Objectively they had the following distinguishing characteristics. (1) They received negative responses from adults and children. (2) They did not get along well with other children, either because they shied away from social interaction or because they continually entered into it only to produce negative outcomes. (3) They could not negotiate effectively with adults or children and get acceptance for their wishes or desires. (4) They often differed from other children in energy level, size, coordination and ability to make use of small muscle activity; they were higher-energy, larger, and/or poorly coordinated.

Among the several types of non-thrivers were those who did not approach other children. These children tended to play by themselves, to reject or escape from adult approach and to engage in solitary activities which did not seem to be particularly pleasurable to them.

Another type of non-thriver was the child whose style and energy level seemed to be too much for the setting to cope with. Often he or she had great needs for boisterous, large muscle activity. There is a large group of non-thrivers, who immediately come to every observer's mind, who simply could not cope with the constraints of the setting. We could imagine them on farms, or in spacious neighborhoods where there was plenty to do, lots of errands to run and few of the

very narrow constraints inevitable within a group of children sitting at a table. These children were frequently interested in other children and appeared to possess most of the skills required for developing rewarding social interaction. Much of their trouble with other children stemmed from two sources. First, they sometimes had so much energy that it frightened the more timid children. Second, they received so much negative adult input that to play with them almost invariably meant close contact with a scolding or a series of restrictions. Consequently, many other children appeared to have learned that playing with a non-thriver was a rather hazardous involvement.

Characteristics of Centers

Our data suggest that children with certain characteristics are, in general, easier to fit into a day care setting than children who do not have these characteristics. However, there are broad differences among centers as well as among children. The kinds of adaptation which are demanded of a child will depend on the structure of the center, since this provides predictable differences in experience for children.

Closed Structure Centers

Closed structure centers appeared to be characterized by:

Clarity as indicated by (1) high amount of teacher pressure and frequency of teacher directed group activities in which all the children were engaged in the same activity at the same time; (2) the large amount of time spent in structured transitions, which provided a clear demarcation for the beginning and ending of activities 1/ ; (3) a prevalence of play equipment and activities which gave clear, positive feedback about correct and incorrect responses, i.e., simple play equipment which had only one use, and closed play equipment which permitted only one solution.

Dependence as indicated by (1) the frequency of teacher decisions as to how the child was to be occupied and when he was to start and stop activities; (2) higher frequency of attention directed to adults.

Restriction as indicated by (1) large numbers of activities which permitted only limited mobility; (2) the provision of activities which set tight limits on the range of responses; and (3) the presence of

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1/ See pages 31-33 of The Day Care Environmental Inventory where we discuss clarity and problems of reliability in recognizing beginning and ending of activity segments in open and closed structure centers (Prescott, Kritchevsky, Jones; 1972).

factors which interfere with a child's functioning, for example, not enough equipment, crowding, teacher restrictions on exploratory activity.

Nonpersonal, task oriented, teacher approach as indicated by (1) high ratings on neutral teacher approach and teacher emphasis on rules of social living; (2) more pressure than facilitation of children's activity by teachers; and (3) the lower ratio of adults to children during activity segments.

Open Structure Centers

Open structure centers appeared to be characterized by:

Ambiguity as indicated by (1) the large amounts of abortive activity and (2) the circumstances mentioned below which require choice making.

Independence as indicated by (1) large amounts of spontaneous initiation and termination of activities; (2) frequent free choice structure where children are expected to choose their own activities; (3) low amounts of teacher pressure; (4) relatively large numbers of activity segments where no teacher was present; and (5) low frequency of activity segments labeled limited mobility.

Experimentation as indicated by (1) high amount of play equipment rated as open, having many alternatives; (2) teacher emphasis on creativity and experimentation; (3) the high incidence of segments rated "teacher opens activity structure to more possibilities".

Variety as indicated by (1) a wide range in social structures; (2) variations in the adult-child ratio during activity segments; and (3) the presence of complex and super units.

Personal teacher approach as indicated by (1) relatively high ratings on teacher approach as sensitive, friendly; (2) teacher emphasis on consideration and mutuality; (3) frequent teacher facilitation of child's activity; and (4) frequency of adult-child ratio of 1:3 or less during activity segments.

The Relationship of Children's Behavior to Center Structure

The structuring provided by closed settings required that children pay attention to constraints and to the adults who were imposing them. Children in these settings were significantly higher on percentage of responding behavior in all categories except for looking, watching and receiving help. They more often recognized cognitive

constraints, directed more attention to adults and received more total adult input. Children in open settings had a significanely higher percentage of thrusting behaviors in all categories.

Goodness of Fit

These findings led us to a concern for goodness of fit between child and center. Our definition of a good fit for an individual child in a day care program is that the adults in the center and the activities which they provide enable a child to experience himself as competent and likeable and provide him with opportunities for enthusiastic and sustained involvement.

Who Fits What Center?

Throughout the study we played the fitting game, asking ourselves to judge the relative merits of all the centers for a given child. For example, we looked at the non-thrivers discussed in the previous chapter.

As already suggested, observers felt that Josie would be better in a center such as Dover, where adults could appreciate her energy and physical competence, but where there were clear cut tasks giving feedback for competence and requiring attention to objective constraints. Adults in this setting were not cold, but they kept a certain distance, rewarded competence and ignored behavior which would lead to interpersonal games. Despite the open structure at Kirkland Christian, adults were forced much of the time to decide when Josie would start and stop activities. At Dover these decisions were built into the setting and applied across the board, and would have elicited more responsive behavior.

Josie would have been appreciated at Dover, but she might have learned more about relating to other children at Firestone, the Montessori center with an attached elementary school. This center had the traditional Montessori equipment, but permitted children considerable leeway in getting started. Teachers accepted and enjoyed children's lively social life. Here we saw a graduated cylinder with its fitting block transformed into a truck and children dueling with carrots before peeling them. Josie would have considered the task of carrying a tray with 12 juice cups on it as worthy of her talents. Table setting, with its accompanying practice in matching and ordering, would have required that Josie pay attention to cognitive constraints. The wide age range, especially on the playground, would have given her the challenge of older children and real experience in finding her place in a group.

Anthony, in contrast, might have fared better in an open structure center since open centers tend to elicit more thrusting behavior. Kirkland Christian, among others, would have provided many more opportunities for him to act openly on the environment. His isolation and seclusiveness would have been a challenge to teachers who were sensitive to individual needs and probably more skillful with passive than with acting-out children. Juniper might have been even better with its egalitarian, racially diverse staff, or Highland Christian with its male teacher.

Alternatives for Butch would be harder to find. His high energy level and innovativeness were more suited to settings with lots of space, fewer children, and a wider age range. Live Oak, the center with a large grassy setting and separate buildings, would have given him plenty of outdoors; its one to seven adult-child ratio would have provided adults to give him attention. However, its lack of boundaries, absence of defined adult expectations, and narrow age groupings might have encouraged his impulsiveness.

Highland Christian was spacious, had a meadow for children to romp in, and well-organized roomy play areas. Teachers were patient and ignored a good deal of pesky behavior. Both the space and the teachers would have provided more support for Butch's growth than was available to him at Maywood.

We could not think of a really good placement for young John. At Live Oak he would have had laps available and more adult attention than was possible at Emerald. (Normandie did not accept children this young.) Still better for this very young child, a family day care home with fewer children of wider age range would have made his behavior seem less deviant and given him leeway to absorb new experiences at his own pace.

CHAPTER 9

ASSESSING QUALITY

Our observations in this study were designed to examine the relationship between children's behavior and a variety of environmental dimensions. In the preceding chapter we have summarized our findings concerning these relationships and proposed a definition for judging goodness of fit between a child and a center. In this chapter consideration will be given to the assessment of quality in group day care.

Quality and Goodness of Fit

Throughout our presentation we have tried to give some feeling for the complexity of the relationship between an individual child and a particular center. For each child there is a diversity of possibilities and a uniqueness of the fit. We suggest that measures of day care quality should be based on the concept of goodness of fit for individual children.

Our data make it possible to propose fairly specific behavioral indicators as a basis for judging the adequacy of the fit. A child who has a good day care placement will be low on the following modes of behavior:

1 stereotyped behavior,
2 tentative behavior,
3 not attending to external stimuli,
4 is physical active 1/,
5 selects, chooses 2/,
6 receives pain, frustration (especially from adults, but also from children).

The presence of these behaviors is associated with the global ratings of 1) low involvement and 2) absence of pleasurable affect.

It is more difficult to specify a profile of positive attributes, but a child with a good day care placement should show some incidence

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1/ As defined, this coding was used only for physical movement such as running across the yard, etc. which was not attended to with concentration. Trike riding, sustained climbing, etc. all were coded attends with concentration.

2/ This coding is indicative of getting-started behavior. Thus, high frequency means that a child is not settling into an activity.

of 1) receiving help, 2) mutuality in social interaction, 3) awareness of cognitive and social constraints, and 4) approximately equal amounts of thrusting behavior and responding behavior.

It is our opinion that a good day care placement should be evaluated on an individual basis. However, it is possible to approach the evaluation of a day care center in terms of the overall frequency of the behaviors just described, thus getting some picture of its ability to individualize and provide effectively for differences among children.

We would argue that a center where children infrequently behave in the ways specified on page 96 is a better quality center than one where such behaviors are often evident. According to our data a center probably should not exceed 10% (of all observed behavior) in stereotyped, undifferentiated and tentative behaviors 3/. The amount of behavior coded as 1) physically active and 2) selects, chooses probably should not exceed about 15%.

Since the coding, receives pain and frustration, occurs most often as a result of a child's previous thrusting behavior, we propose that its frequency needs to be considered in relation to frequency of thrusting behavior. Incidence of receiving pain, frustration should probably not be higher than 10% of total thrusting.

The amount of responding behavior probably should not exceed thrusting behavior by more than one-third. Amount of receiving help should not be lower than about 4%. Recognition of cognitive constraints should not be less than 4%. Since all centers showed relatively similar amounts of mutuality in social interaction (though not all children did), it is not possible to set limits for this behavior.

Quality and Center Structure

Certain aspects of center structure, which consistently presented difficulties to children, evoked the behaviors we have described as predictive of lower quality. We propose that a quality center will be observed to have the following characteristics:

3/ Our observations were made systematically, using a complex coding schedule, and percentages were computed precisely. However, the more intuitive impression of a competent observer of children in day care should yield approximations of these percentages adequate for general quality assessments. We are suggesting actual percentages to provide clarity about a way of thinking of program quality, not as a hard and fast guideline.

1 incidence of spontaneous initiation and termination of activity segments will not be lower than 30%,
2 incidence of limited mobility will not exceed 50%,
3 time in structured transitions will not exceed 20%, and
4 at least five components of the softness rating will be present.

None of the measures thus far proposed have included the indicators commonly used by regulatory agencies concerned with quality of care. Aside from basic features of safety, such agencies focus more frequently on the ratio of staff to children and on the experience and training of staff.

In a previous study we found that special training in early childhood education was associated with a higher incidence of teacher encouragement, defined as supporting and extending the child's self-initiated activity. However, we also found that as center size increased, this relationship weakened (Prescott and Jones, 1967).

Although personally favoring an ample supply of adults, we have not been convinced by our data that adult-child ratios of 1:5-8 are predictably superior to those of 1:10-12. 4/ Our experience has led us to conclude that optimum functioning of staff cannot be predicted from training or favorable ratios alone. It is here that a consideration of program structure becomes important.

As we see it, a center does not have absolute freedom to select open or closed structure. A realistic choice will be based not only on philosophy, but also on a careful consideration of staffing and spatial quality. Open structure has individualization as its goal. Obviously as numbers of children increase there are more individuals to keep track of, and the job of evolving program in response to individual interests and needs becomes more difficult. Consequently, where there is only one adult to a large group it becomes more difficult to provide for a free choice program.

To interact effectively with children in an open setting, the adult must know how to (1) set up a supportive physical environment in which there is real choice for children, (2) observe effectively and ascertain where each child is in his development, (3) step in at the appropriate moment to provide clarity or to increase complexity. If an adult has not had much training in working with young children

4/ Since cost of care is closely tied to adult-child ratios, this issue is important to considerations of expansion of day care services.

and thus has limited skills in monitoring and a limited repertoire of resources to get good interaction flowing, closed structure may be a more manageable way of organizing the day than open structure.

Open structure may not be possible in certain settings. Our studies have indicated that an increase in center size beyond approximately 60 children appears to require a less flexible operating system. Often the center size was determined for reasons of economy, not philosophy, but the fact that there is only one kitchen and one toileting area for 120 children instead of 50 means that the logistics must be much more carefully planned. If such essential routines as eating, toileting and naptime are not carefully regulated, the center cannot function. This requirement in itself tends to produce movement away from open structure, even among staff who are committed to it.

If center space cannot be set up for free choice because of vandalism, shortage of equipment, or inadequate and poorly arranged storage, the teacher is forced to take a more active structuring role. We have found that teacher behavior can be predicted from quality of space. Of particular importance is the amount to do per child. It is impossible to expect self-regulation in a free choice setting if there are not choices to make (Kritchevsky, 1967; Kritchevsky and Prescott, 1969).

In summary, closed structure appears to be the more workable solution for settings where the number of adults to children is low, where the center size is large, where teacher experience is limited, and/or where spatial arrangements do not permit children free exploration of the environment. Open structure appears to be appropriate for centers which have a higher number of adults to children, where teachers have had considerable training, and where the quality of space permits a good deal of self-regulation on the part of children.

Quality in Closed Structure Settings

According to the criteria for quality which we have proposed, the three most closed centers in our sample do not qualify. At these centers, in our judgment, the restrictiveness outweighed the advantages which stem from clarity, and sufficient rewards for conformity were not provided.

Much of the non-reward in these centers stemmed from the tendency to place sharp restrictions on children's use of their bodies, through demands for long periods of sitting passively in close proximity to other children without touching, demands for standing in line, demands for use of equipment in only one position (i.e., swinging properly, not getting in the sandpile, not running, etc.). Since deviations were frequent, much teacher attention was directed to keeping children's bodies in acceptable positions.

In the more open of the closed centers, these restrictions were much less common. The clarity and rewards for conformity to expectations outweighed the restrictiveness. These centers rewarded the meeting of expectations and provided ample opportunities for a sense of group membership and for pleasurable social contact. They also provided leeway for compliance and patient support for stragglers and nonconformists. These differences between the more rigid and the more flexible closed structure centers were particularly apparent in the modes of handling structured transitions, teacher directed activities and free play.

Structured Transitions. In closed settings the amount of time spent in structured transitions probably has to be higher than in open settings. Where teachers permitted children to use these periods as a relaxed social time or as a friendly group work time, they often provided a clear and rewarding spacer between activities. In the most closed centers, in contrast, time in transitions often was excessive, absolute conformity of body posture was expected and social contact was forbidden.

Teacher Directed Group Activities. In the less closed centers there was an absence of strict demand for performance. These centers tended to use either one of two options. 1) Everybody participates as a group. Such activities as singing, games such as Simon Says, group chants, for example saying the alphabet or counting to twenty, are done by the entire group. This type of structure usually permits children who understand and enjoy the activity to do it loudly and enthusiastically, letting those children who do not understand it or who do not wish to participate have the option of observing. Ordinarily, this format does not endanger feelings of competence and self-esteem. 2) Public performance is optional. In this format the teacher may ask for children to volunteer for performance such as: "Who would like to say the days of the week?" or, "Count to twenty." or, "Tell the weather man what kind of weather should go on the flannel board." Here again, it is the child who decides when he is ready and the format permits children who do not know what to do or are worried about self-exposure a chance to sit and observe. This format for group activities can work well in a wide-age range group where two-year-olds can get some idea of expectations and four-year-olds have an opportunity to demonstrate their competence.

A third option, teacher-required performance, was used in the more closed centers but seldom in the less closed centers. In this format the teacher directs a question at a particular child like, "David, what comes after A?", "How many children are in the group, Mary?", "Linda, put the smallest cat on the flannel board." Young children often cannot respond to these demands, and failure to answer can be damaging to feelings of competence and self-esteem. Unless

the teacher knows the children very well and is exceedingly skillful in making it clear that wrong answers are useful or can build a bridge between her request and the child's logic, this format risks the creation of non-thrivers in the setting.

Teacher Directed Individual Activities. These activities typically involve small muscle coordination and sometimes the completion of a specific product. The most closed centers very often required that the specific product be exactly as the teacher requested. For example, if the task was making a valentine, the requirement was that the white heart be pasted on the red heart. In the more open centers more leeway was provided for the range of difference in eye-hand coordination and small muscle development. In these settings there may well have been an expectation for a valentine as a finished product, but each child was given considerable freedom as to the particular form it would take.

Children whose eye-hand coordination and small muscle development have matured early will often find these activities enjoyable and will pursue them for long periods of time. However, children who have not reached this level of maturity often find them difficult demands where they are bound to fail.

Free Play. Since opportunities for initiative are limited in teacher directed settings, periods allowed for free play need to permit genuine self-regulation. In the most closed settings, free play often was hedged in by a series of restrictions on how one could use the swing, prohibitions on running, imaginary boundaries which could not be crossed, or requirements that children play only in one area. In the more open settings, free play was more genuinely free. It was a time when the teacher could stand back and take a rest while children were permitted unrestricted opportunity to play with the equipment provided.

Free play areas in closed settings typically offer much less to do than similar areas in open settings. In general, free play will be less restrictive if there is an ample supply of props and equipment which will help children organize their play.

Quality in Open Structure Settings

The criteria we have proposed for center quality do not account for certain conditions which apply to open structure only. Centers which attempt open structure need the following characteristics to achieve quality:

1 at least 20% of activity segments will have an adult-child ratio of five or fewer children to an adult,
2 incidence of children receiving help will not fall below 5%,
3 teacher incidence of opening activity segment structure will not be lower than 10% 5/,
4 spatial quality will be high, as indicated by well-organized play areas which have three or more things to do per child and a variety of at least six different kinds of things to do 6/,
5 time in abortive activity will not exceed 15%.

Rewards in an open structure setting stem primarily from individual activity and exploration rather than from conformity to group norms. If there are not sufficient challenges for individual development, an open structure program is unlikely to achieve its goals. A major problem in open settings is the failure to provide a focus for children who need it. To avoid this failure, teachers must intervene to increase depth and complexity of exploration as children exhaust the superficial possibilities offered by the setting.

It is essential in open settings to provide for individualization. In quality centers the day will be planned so that some children have opportunities to play without involvement with an adult, while other children are receiving individualized attention. In our coding, the adult-child ratio for activity segments, the amount of help which children are receiving and the frequency of teacher opening of activity segment structure are indicators of individualization. The adult in an open setting who is observing carefully and paying attention to individual development will see when a child is stuck and will step in to open the activity and enable a child to explore further.

When an open structure setting is not working well, two causes are most common. One is a lack of teacher warmth and responsiveness. This is indicated by the codings for individualization which we have just discussed as well as by direct global ratings of teacher warmth 7/. Unexpectedly, total amount of teacher facilitation did not describe this dimension, probably because facilitation is justifiably low when children are highly involved in self-directed activity. In our sample two open centers, Irvine and Maywood, appeared to have less responsive

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5/ The teacher facilitates by adding props, ideas or suggestions which add rather than close off new possibilities.

6/ See Kritchevsky and Prescott (1969) for detailed description of the space rating scheme.

7/ For a description of this rating see Prescott and Jones (1967) or Prescott and Jones (1972).

teachers. These centers were particularly low in the descriptors which we have suggested and also impressed our observers as lacking staff solidarity. Teachers ignored children to talk to each other privately or teachers ignored each other, in contrast to other centers where teachers openly and good naturedly included children in their circle of staff communication and friendliness.

The other problem which often undermines the success of an open structure center is poor spatial quality. If a program is going to provide for free exploration of the environment, there has got to be a great deal of well-organized environment for children to explore. We have not gone into an extensive discussion of spatial quality in this report. The softness rating, which appears to be a good indicator of quality in closed structure, is not equally predictive in open structure. All open structure centers did have more than five components of the softness rating. What open centers most often lack is enough for children to do and careful organization of the space so that children can find what there is to do and can pursue it without interruption.

The Concept of Double Structuring. Open structure centers clearly encourage choicemaking by children. Those which handle large amounts of choice most effectively appear to utilize what we call double structuring: the teacher constantly structures both 1) by her input, and 2) by providing an environment which facilitates getting-started behavior and regulates intrusion by the use of insulated play areas with clear-cut boundaries.

We have stated that ambiguity is characteristic of open structure centers. In part this ambiguity is the result of the large amount of choice which is offered in an open center. If this ambiguity is increased by the absence of adequate spatial cues, it will lead to indecisive and inconsistent responses by teachers and children. Additional ambiguity is sometimes the inadvertent result of a center's efforts to improve quality by increasing adult-child ratios through the use of students and volunteers. If turnover is high and orientation and supervision are limited, this varied assortment of adults may offer children inconsistent cues for their behavior. If both the space and the people in it increase the level of ambiguity, there will be a great deal of abortive activity on the part of children.

Decreasing Ambiguity and Increasing Complexity

Since open structure centers often do not have a philosophic basis for responsible or work-oriented behavior, such as is provided by the religious orientation of church based centers or the philosophic orientation of a Montessori school, an open center may fail to move children from a process-orientation to a product- or goal-orientation as they become ready. This lack is often experienced by observers

as a feeling of boredom, randomness, or superficiality of the play. These behaviors, in turn, increase ambiguity in the setting.

An open center of high quality counteracts this problem in several ways. One is through facilitation of problem-solving. Teachers actively enter into task-oriented discussion and activities with children, at times appropriate for the purpose of focusing children's attention toward recognition and completion of their self-chosen tasks. The relationship of the child to other children and to the group also becomes the subject of problem-solving and thus provides an important area in which the value system of an open center is communicated. Staff failure to create clarity in this area will increase ambiguity if social relationships are ignored or if they are handled by a last-resort laying down of arbitrary rules.

Another useful approach provides for the introduction of activities which require recognition of cognitive constraints. For younger children this often means informal conversations which require that children pay attention to and try out their understanding of daily events. For example, a teacher approach saying "Time for lunch" usually is less fruitful than asking "What time does your tummy tell you it is?" For older children this approach often includes the introduction of games. Such games as throwing a bean bag into a circle from different distances not only gives children a challenge of testing their skills, but also builds in the recognition of nearer and farther and the distance between three feet, five feet, and ten feet.

In activities of this sort, cognitive challenges also can be built into large muscle activities. This combination is particularly helpful for children who often need manipulative practice with concepts before they handle them on a verbal level. It is also useful for high energy children like Josie and Butch who were much more comfortable dealing with the world in large muscle rather than small muscle terms. For such a child counting stairs as he walks up or having the teacher count as she pushes a child on a swing may be a helpful way of focusing on concepts which he will soon be required to use on a more abstract level.

It is also helpful to give children in open settings some real responsibility for maintenance of the setting. Such activities as helping to get things ready for lunch, cleaning up afterwards and putting down cots enable children to confront some of the real problems of system maintenance. It is easy for an open structure center with a favorable adult-child ratio to be too child-centered and for children to see adults primarily as servants and entertainers. A full day program will be both more mutually livable and more educational if some of the responsibilities are shared.

Non-Thrivers and Accountability

Our considerable experience with center staffs has led us to believe that their intuitive feelings about children and their relationship to the program are accurate. We invariably agreed with their nominations of thrivers and usually agreed that non-thrivers were having real problems with the program.

We were struck by the usefulness of non-thrivers in pointing out the demands and shortcomings of the centers in which we observed. It has occurred to us that concentrated staff attention to creating a more workable environment for its non-thrivers would tend to increase quality for every child in the center. For example, a center's demand for limited mobility may by noticeable primarily through the non-thrivers who simply cannot handle it, but this demand is also a source of discomfort and restricting of experience for many other children in the setting.

It has seemed to us that training of personnel in early childhood education is not usually designed to take these intuitive responses seriously and hence does not help teachers to build problem-solving bridges between their feelings and the choices available in daily decisions. A promising approach to accountability, which has been tried in a few elementary schools (and might well be considered seriously in many schools and day care centers), consists in asking the teacher to 1) identify the non-thrivers in the setting, 2) invent ways of modifying the environment to meet their needs more adequately, and 3) keep track of what happens and report to other staff members, to a supervisor, and/or to parents. Innovation to meet individual needs is thus encouraged rather than, as happens in many programs, regarded as unacceptable deviation from the standard curriculum which all children are supposed to fit.

As we said at the beginning of this chapter, our criterion for assessing quality in day care is based on the concept of goodness of fit for individual children. Whatever its structure, a quality center is one which pays attention to its non-thrivers and provides enough flexibility to help them move toward a thriving experience.

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APPENDICES

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TABLE 1

COMPOSITION OF SAMPLE IN GROUP DAY CARE
BY AGE, SEX AND THRIVE RATING

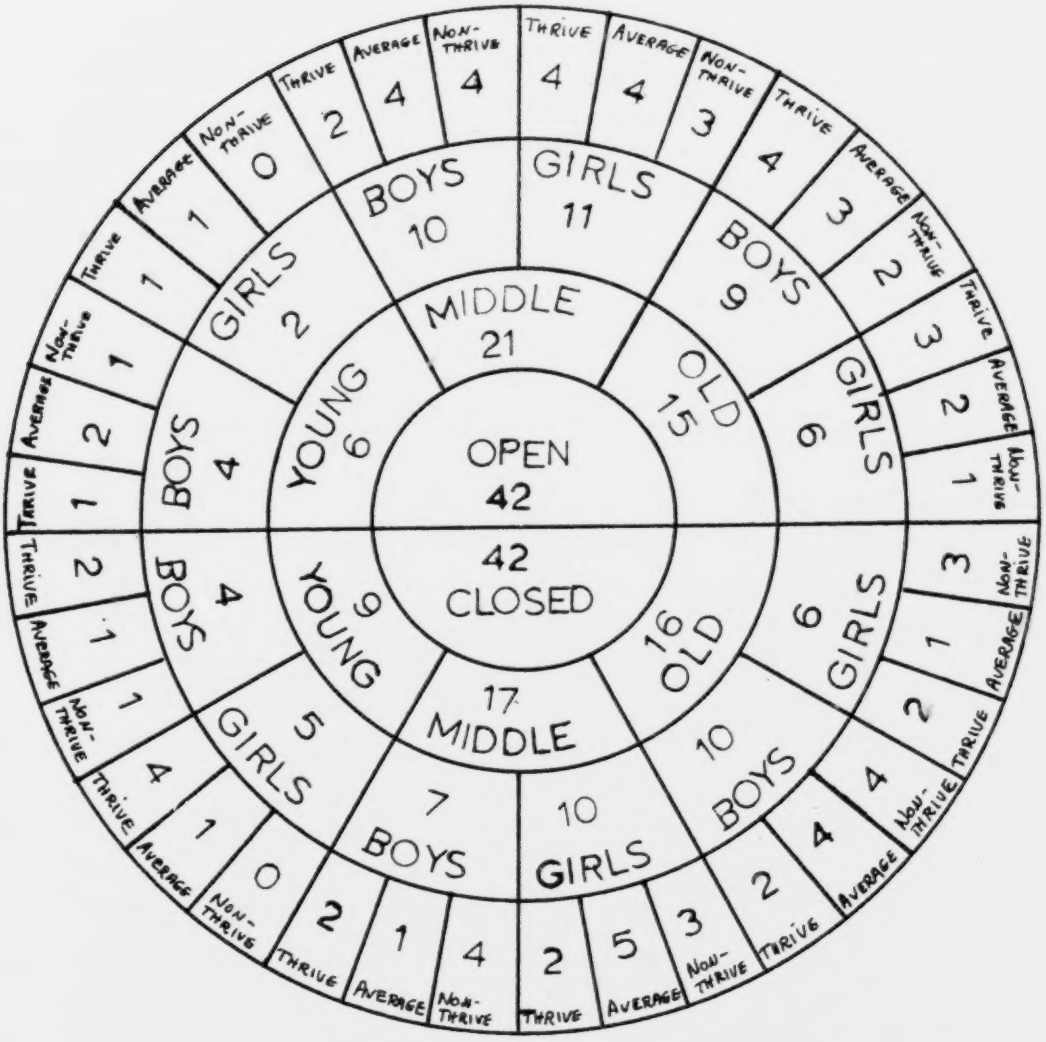

TABLE 2

BEHAVIORAL VARIABLES SHOWING SIGNIFICANT DIFFERENCES
BY AGE OF CHILDREN

	BEHAVIORAL VARIABLES	MEAN PERCENTAGE OF OCCURRENCE		
		Younger (N=15)	Middle (N=38)	Older (N=31)
	15-Second Coding			
*	Gives orders	0.8%^{t}	1.6%^{t}	1.4%
**	Aggressively intrudes: playful	0.9	1.2	2.1
**	Unintentionally intrudes	0.9	0.4	0.3
NS	Asks for help: task oriented	1.6	1.9	1.8
**	Receives help: task oriented	5.2^{t}	4.0	3.3^{t}
**	Exhibits mutual social interaction	4.5	7.7	9.4
**	Exhibits hostile social interaction	0.1^{t}	0.4^{t}	0.4
**	Sees pattern, gives structure	1.1^{t}	2.0^{t}	2.2
*	Total frustration	3.4^{t}	2.7	2.5^{t}
*	Non-focused engagement	27.0^{t}	23.0^{t}	23.1
NS	Total focused cognitive awareness	4.9	5.8	6.8
	Attention directed to:			
NS	Adult	25.0	24.2	21.8
**	Child	15.7	20.9	23.4
*	Environment	52.1	47.5	45.7
NS	Group	4.1	3.2	4.0
	Activity Segment Descriptors			
	Activity segment label:			
*	standard creative exploring	13.2^{t}	7.7^{t}	6.9
*	listening	3.9^{t}	8.1^{t}	8.9
*	Program structure: toileting, wash-up	4.5^{t}	2.8	0.9^{t}
**	Social structure: one friend present	5.2^{t}	8.4	13.6^{t}
	Child's action during activity segment:			
*	large muscle	2.8^{t}	5.6	6.7^{t}
*	physical and intellectual exploring	11.8^{t}	7.7	6.7^{t}
*	listening, looking	4.0^{t}	6.6	7.3^{t}
**	singing, dancing, finger play	0.5^{t}	3.0^{t}	3.1
	Child's relation to activity structure:			
**	both adds and brings into focus	4.2^{t}	10.0^{t}	12.4

* significant at .05 level; **, .01 level; NS, not significant (F ratio except where T-test is indicated by t)

TABLE 3

BEHAVIORAL VARIABLES SHOWING SIGNIFICANT DIFFERENCES
BETWEEN BOYS AND GIRLS

	BEHAVIORAL VARIABLES	MEAN PERCENTAGE OF OCCURRENCE	
		Boys (N=44)	Girls (N=40)
	15-Second Coding		
**	Aggressively intrudes: playful	1.9%	1.0%
NS	Asks for help: task oriented	1.7	1.9
*	Asks for help: affect oriented	0.3	0.5
NS	Receives help: task oriented	3.8	4.1
*	Receives help: affect oriented	0.8	1.3
NS	Total asking and receiving help	6.6	7.8
*	Unintentionally intrudes	0.6	0.3
	Attention directed to:		
*	adult	21.6	25.4
*	environment	49.6	45.5
NS	child	20.3	21.5
	Activity Segment Descriptors		
	Mobility:		
**	much mobility	20.5	11.9
**	indeterminate mobility	33.8	42.6
NS	little mobility	45.7	45.5
*	Social structure: child alone	7.1	3.8
**	Teacher approach: neutral	34.7	22.8
	Child's action during activity segment:		
*	large muscle	6.9	3.9
*	singing, dancing, finger play	1.7	3.6
NS	Activity segment label: large muscle	13.3	9.1
*	Pleasurable affect	31.3	22.1
*	Moderate distress	3.4	6.6

* significant at .05 level; **, .01 level; NS, not significant (T-test)

TABLE 4

BEHAVIORAL VARIABLES SHOWING SIGNIFICANT DIFFERENCES
BETWEEN THRIVERS, AVERAGE AND NON-THRIVERS

	BEHAVIORAL VARIABLES	MEAN PERCENTAGE OF OCCURRENCE		
		Thrivers (N=29)	Average (N=29)	Non-thrivers (N=26)
	15-Second Coding			
*	Receives frustration, rejection, pain	2.0%	2.0%	2.9%
*	Shows awareness of cognitive constraints	2.9[t]	2.4	2.0[t]
*	Aggressively intrudes: hostile	0.5	0.4	0.8
*	Total frustration	2.4	2.4	3.5
*	Non-focused engagement	22.0[t]	24.3	25.1[t]
*	Total focused cognitive awareness	6.9[t]	6.0	4.9[t]
NS	Total of aggressive rejecting, hostile behavior	0.9	0.9	1.5
NS	Total asking for help	7.8	7.0	6.6
	Activity Segment Descriptors			
	Activity segment label:			
*	affectionate conversation	2.1[t]	1.3	0.2[t]
*	testing limits	4.3	4.0	9.1
*	unusual cognitive	2.8	1.7	0.8
*	Program structure: structured transition	11.1[t]	&	18.8[t]
	Teacher approach			
NS	sensitive	23.9	19.4	12.5
*	friendly	42.5[t]	41.8	29.7[t]
NS	neutral	24.2	29.9	33.4
**	insensitive	9.4	8.9	24.3
	Teacher emphasis:			
*	social rules, control and restraint	37.3	38.7	55.8
*	consideration and mutuality	19.2[t]	12.7	8.6[t]
	Child's action during activity segment:			
**	dealing with emotion	2.3	2.3	9.0
**	pleasure and delight	7.3	4.0	1.7

(cont.)

(TABLE 4, cont.)

	BEHAVIORAL VARIABLES	MEAN PERCENTAGE OF OCCURRENCE Thrivers (N=29)	Average (N=29)	Non-thrivers (N=26)
	Interference with functioning:			
**	none	90.2%	87.0%	81.8%
NS	task exceeds child's skill	1.2	3.8	3.2
*	task does not challenge or scheduling, other people, etc. interfere	8.5	9.2	14.9
**	Variable affect	6.3^{t}	8.9	13.2^{t}
	Degree of involvement			
*	high	73.5^{t}	&	62.6^{t}
*	moderate	24.0^{t}	&	32.2^{t}
NS	low	2.5^{t}	&	5.1^{t}
		Adult Input to Individual 1/		
NS	Pressure	28.4	26.2	41.0
NS	Instigation	26.8	23.0	22.2

* significant at .05 level; **, .01 level; NS, not significant (F-ratio except where T-test in indicated by t)

& Data not available

1/ These input data are frequencies per 200 minutes of observation, not percentages.

TABLE 5

SIGNIFICANT DIFFERENCES BETWEEN CLOSED AND OPEN CENTERS FOR TIME SPENT IN SEGMENT TYPES

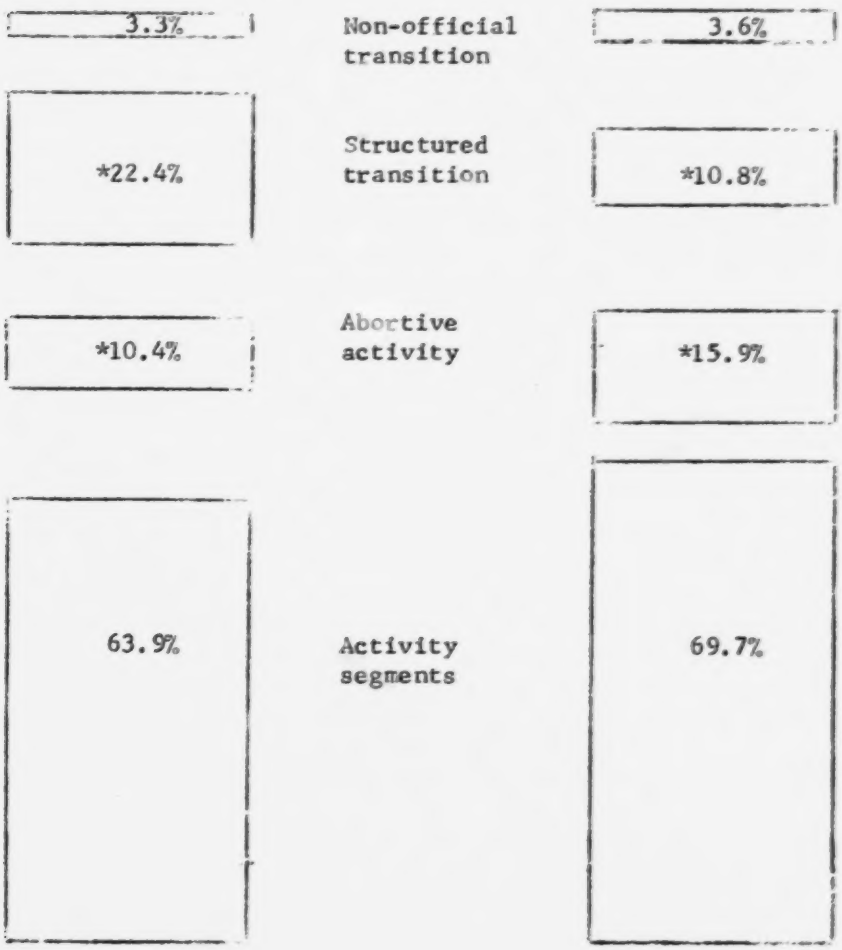

TABLE 6

BEHAVIORAL VARIABLES SHOWING SIGNIFICANT DIFFERENCES BETWEEN OPEN AND CLOSED CENTERS

	BEHAVIORAL VARIABLES	MEAN PERCENTAGE OF OCCURRENCE	
		Closed Centers (N=42)	Open Centers (N=42)
	15-Second Coding		
**	Ignores intrusion	1.6%	1.0%
*	Avoids intrusion	0.3	0.5
**	Is physically active	4.9	7.2
**	Selects, chooses	5.6	7.8
**	Asks for help: task oriented	1.3	2.3
*	Gives information: task oriented	6.0	7.8
**	Total thrusting behavior	25.7	34.2
**	Obeys, cooperates	6.7	3.8
*	Gives stereotyped response	3.8	2.5
*	Responds to questions	2.9	2.0
**	Sensory, tactile	0.4	0.9
**	Total responding behavior except looks, watches	23.0	19.3
*	Shows awareness of cognitive constraints	2.8	2.0
**	Shows awareness of social constraints	2.0	1.3
*	Tentative behavior	7.3	5.5
**	Total thrusting	25.7	34.2
*	Attention directed to adult	25.2	21.7
	Activity Segment Descriptors		
	Space setting:		
**	indoors	73.1	54.3
**	outdoors	26.9	45.7
	Activity segment label:		
**	large muscle	8.0	14.6
**	imitating	7.5	2.5
**	unusual creative exploring	1.4	5.0
**	standard cognitive	9.9	3.6
**	structured transitions	14.8	8.7

(cont.)

(Table 6, cont.)

	BEHAVIORAL VARIABLES	MEAN PERCENTAGE OF OCCURRENCE	
		Closed Centers (N=42)	Open Centers (N=42)
	Program structure:		
**	free choice	28.9%	62.3%
*	teacher directed individual	4.0	1.9
**	teacher directed group: music, stories	15.1	7.7
**	teacher directed group: games	8.9	3.0
*	teacher selected individual activities	6.6	1.0
**	structured transition	20.6	8.0
	Physical setting:		
**	simple	57.3	44.7
**	super units	5.0	11.4
**	use of slides, poles, jumpers, etc.	1.8	5.9
**	use of tables, floor, or contained yard space	64.4	52.1
**	use of props for house play and/or pretending	8.6	17.2
**	use of structured games, puzzles	9.4	3.4
	Play equipment type:		
**	open	22.7	46.8
**	closed	40.6	16.4
	Mobility:		
**	much	11.4	21.4
*	indeterminate	34.4	41.6
**	little	54.2	37.0
	Social structure:		
*	one friend present	7.1	12.4
*	adult involved with individual/small group	1.5	3.7
**	group with adult present	59.9	45.1
	Teacher approach:		
**	sensitive	11.1	26.4
NS	friendly	33.7	42.9
NS	neutral	34.4	23.7
**	insensitive	20.8	6.9
	Teacher emphasis:		
**	sensory-motor skills	9.6	3.2
**	social rules, control and restraint	53.0	34.0
**	consideration and mutuality	7.1	20.2
**	formal cognitive skills	16.6	0.5
**	pleasure and delight	3.1	14.1
**	creativity and experimentation	0.4	8.1
**	multiple	1.8	4.5

(cont.)

(Table 6, cont.)

	BEHAVIORAL VARIABLES	MEAN PERCENTAGE OF OCCURRENCE	
		Closed Centers (N=42)	Open Centers (N=42)
	Teacher influence:		
**	opens inherent activity structure	7.6%	14.7%
*	lets be inherent activity structure	57.4	62.7
**	closes inherent activity structure	40.9	22.6
	Source of initiation:		
**	adult pressured	58.0	20.2
**	adult facilitated	9.5	22.6
**	by another child	1.2	4.7
**	spontaneous	26.5	45.8
	Source of termination:		
**	adult pressured	57.2	21.1
**	adult facilitated	10.3	19.5
*	by another child	1.6	3.8
**	spontaneous	21.9	42.3
*	unclear or natural ending	9.0	13.3
	Child's action during activity segment:		
*	structured transition	12.0	8.4
**	eating	7.6	11.4
**	being a captive audience	8.5	1.7
**	pleasure and delight	1.9	7.0
**	improving a skill	7.3	2.9
	Child's relation to activity structure:		
*	sets limits	1.3	3.2
	Interference:		
**	none	65.8	80.1
NS	task exceeds child's skill	4.6	6.5
**	task does not challenge or scheduling, other people, etc. interfere	29.6	13.4
	Degree of involvement:		
**	low involvement	4.9	1.3
	Segment type:		
NS	activity segment	51.3	49.8
**	official transition	18.9	13.0
*	non-official transition	10.3	13.8
*	abortive activity	19.3	23.4

(cont.)

(Table 6, cont.)

BEHAVIORAL VARIABLES	Closed Centers (N=42)	Open Centers (N=42)
Adult input 1/		
** total adult pressure	44.6	18.4
** total adult input	66.8	44.4

* significant at .05 level; **, .01 level; NS, not significant (T-test)

1/ This entry in mean frequency of occurrence per 200 minutes, not percentage.

TABLE 7

BEHAVIORAL VARIABLES SHOWING SIGNIFICANT DIFFERENCES BETWEEN BOYS AND GIRLS AT OPEN AND CLOSED CENTERS

	BEHAVIORAL VARIABLES	MEAN PERCENTAGE OF OCCURRENCE			
		Closed Centers		Open Centers	
		Boys (N=21)	Girls (N=21)	Boys (N=23)	Girls (N=19)
	15-Second Coding				
**	Asks for help: affect oriented			0.3%	0.7%
**	Receives help: affect oriented			0.7	1.4
*	Tests, examines			1.1	1.9
*	Total asks and receives help			7.1	9.5
*	Attention directed to adult			19.3	24.5
	Activity Segment Descriptors				
*	Physical setting simple: other than center yard or room	5.6%	11.0%		
**	Physical setting complex: constructing other than art			10.8	3.8
*	Social structure: child alone	7.3	2.7		
	Much mobility	* 15.3	7.6 **	25.3	16.6
*	Indeterminate mobility			36.0	48.4
NS	Little mobility			38.7	35.0
NS	Teacher opens inherent activity structure			15.4	13.9
**	Teacher lets be inherent activity structure			55.7	71.1
*	Teacher closes inherent activity structure			28.8	15.0
	Child's action during activity segment:				
	Primary choice:				
*	constructing, building			9.6	5.5
	Secondary choice:				
*	dealing with emotion			3.5	10.1
*	physical and intellectual exploring	14.4	6.3		
	Tertiary choice:				
*	dealing with emotion			6.0	17.4
*	making social contact	28.5	11.6		
*	Pleasurable affect			36.6	23.5

* significant at .05 level; **, .01 level; NS, not significant (T-test)

APPENDIX A

TABLE 8

BEHAVIORAL VARIABLES SHOWING SIGNIFICANT DIFFERENCES
BETWEEN THRIVERS AND NON-THRIVERS IN OPEN AND CLOSED SETTINGS

	BEHAVIORAL VARIABLES	MEAN PERCENTAGE OF OCCURRENCE			
		Closed setting		Open setting	
		Thr. (N=14)	Non-th. (N=15)	Thr. (N=15)	Non-th. (N=11)
	15-Second Coding				
*	Aggressively rejects			0.1%	0.4%
*	Aggressively intrudes: hostile	0.3%	0.9%		
*	Receives frustration, rejection, pain	2.0	3.4		
*	Shows awareness of cognitive constraints			2.5	1.4
*	Total rejecting except ignores intrusion			2.1	3.4
*	Attends with concentration	27.4	22.3		
*	Total frustration	2.5	3.9		
	Activity Segment Descriptors				
	Social structure:				
*	one friend present	10.8	3.2		
*	adult involved with individual/small group			5.8	1.1
*	variable			10.4	20.7
	Teacher approach:				
NS	sensitive	16.2	6.0		
*	friendly	41.7	24.3		
*	neutral	26.8	41.7		
NS	insensitive	15.4	28.0		
	Primary teacher emphasis:				
*	consideration and mutuality			28.7	9.8
*	pleasure and delight	5.6	1.6		
	Secondary teacher emphasis:				
*	pleasure and delight			26.7	5.6
*	formal cognitive skills	3.6	22.0		
	Child's action during activity segment:				
*	pleasure and delight			10.4	3.0
*	listening, looking			8.9	3.9

(cont.)

(Table 8, cont.)

	BEHAVIORAL VARIABLES	MEAN PERCENTAGE OF OCCURRENCE			
		Closed setting		Open setting	
		Thr. (N=14)	Non-th. (N=15)	Thr. (N=15)	Non-th. (N=11)
	Interference:				
**	none	72.7%	54.0%		
NS	task exceeds child's skill	1.9	7.6		
*	task does not challenge or scheduling, other people, etc., interfere	25.4	38.4		
*	Variable affect	6.3	13.4		

* significant at .05 level; **, .01 level; NS, not significant (T-test)

APPENDIX B-1

CARD SORT OF CHILDREN'S CHARACTERISTICS

1 Is well coordinated, physically skillful
2 Seeks out other children rather than adults
3 Stays at activities until he completes them
4 Needs lots of time to get used to new situations
5 Likes making things with dough, blocks, collage materials
6 Plays well with other children
7 Is usually cheerful and happy
8 Has a high energy level
9 Enjoys tasks with clear cut rules (puzzles, lotto)
10 Keeps track of everything, never misses a trick
11 Needs adult support in new situations
12 Is cooperative, follows instructions
13 Is slow to warm up, needs time to get into things
14 Is easily distracted from what he is doing
15 Is often the leader
16 Often appears clumsy, awkward, or stiff
17 Adapts easily to new situations
18 Likes to be the leader
19 Feels comfortable about crying or getting angry
20 Does not stay interested in one activity for very long
21 Is often emotional; laughs, cries, gets angry easily
22 Moves slowly, likes quiet activities
23 Is often grumpy or dissatisfied
24 Often acts without thinking
25 Gets into trouble with other children a lot
26 Draws other people to him, is friendly
27 Obeys easily
28 Seems more comfortable with adults than with children
29 Often plays alone
30 Finds it difficult to shift from one activity to another
31 Is more interested in people than in things
32 Likes pretending and dramatic play
33 Seems unusally sensitive to loud noises, sudden movement
34 Likes lots of vigorous, active play
35 Is very interested in letters, numbers and words
36 Likes to figure out how things work

APPENDIX F-2

LETTER OF EXPLANATION TO TEACHERS OF CHILDREN
OBSERVED IN GROUP DAY CARE

Dear

We are conducting a study of children in day care centers which is financed by a grant from the Research Division of Children's Bureau, Office of Child Development of the Department of Health, Education, and Welfare in Washington, D.C.

The purpose of this study is to learn more about the ways in which different kinds of children make use of the settings available to them. It is one of a group of long-range research studies sponsored by the Children's Bureau and is designed to learn more about the specific nature of a variety of environments common to children.

Your school was selected for inclusion in the study because we think that it is a good example of a program which offers full day care to children of working mothers. During the next week or two, members of our staff will visit your group to observe selected children.

We are trying, by a rather complicated coding schedule, to keep track of the experiences of these children. To accomplish this a staff member will visit your group at times prearranged with your director. When we are observing we try to remain as unobtrusive as possible. We prefer not to talk with you or the children during this coding session. If a child does come over to talk with us, however, we do not mind. Our observers will be wearing an earplug timer which gives a "beep" every 15 seconds. If the children are curious about it, we will be glad to show it to them. Please feel free to speak with us before or after our sampling period. If at any time our presence or choice of location interferes with your responsibilities to the children, do not hesitate to speak with us or with your director.

Teachers who are not accustomed to having an outsider in their group sometimes discover that initially they feel a bit self-conscious. If you feel this way at first, you may find it helpful to remember that we are not observing you or writing down what anyone says. We are only recording general categories of children's activities which will be treated statistically. Neither your name nor that of your school will be used (by us) in the final publication, and, of course, none of our records is available to or discussed with directors, Child Care Personnel, or the Department of Social Welfare.

We hope you, as a teacher interested in contributing to knowledge in the field of nursery education (especially when combined with a day

care function) will welcome this opportunity to share your experience with us. Since this is a three-year study, the results will not be available for some time, but we will let you know where they can be obtained when the study is completed.

Sincerely,

Eliabeth Prescott
Research Director

APPENDIX B-3

QUESTIONNAIRE CONCERNING OBSERVED CHILD

Name_____ Age_____

Parent's occupation or general educational level _____

_____

Family Structure -- who lives at home

Mother _____ Father _____

How many brothers: Older _____ Younger_____

How many sisters: Older _____ Younger _____

Others (specify) _____

Did we observe on a fairly typical day?

Informant's relationship to child _____

Is there anything else we should know about the child?